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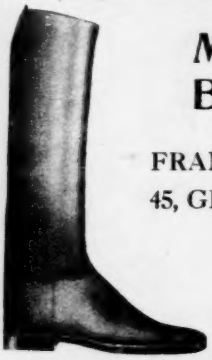

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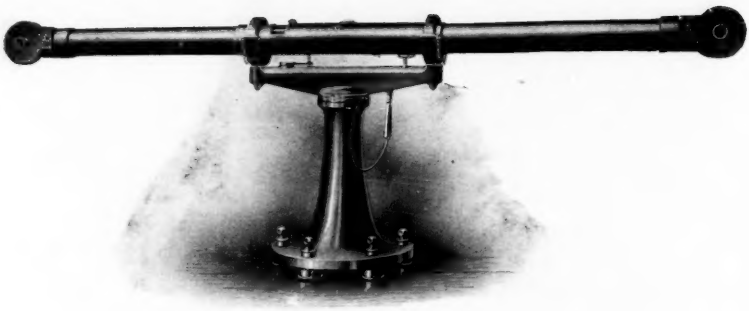

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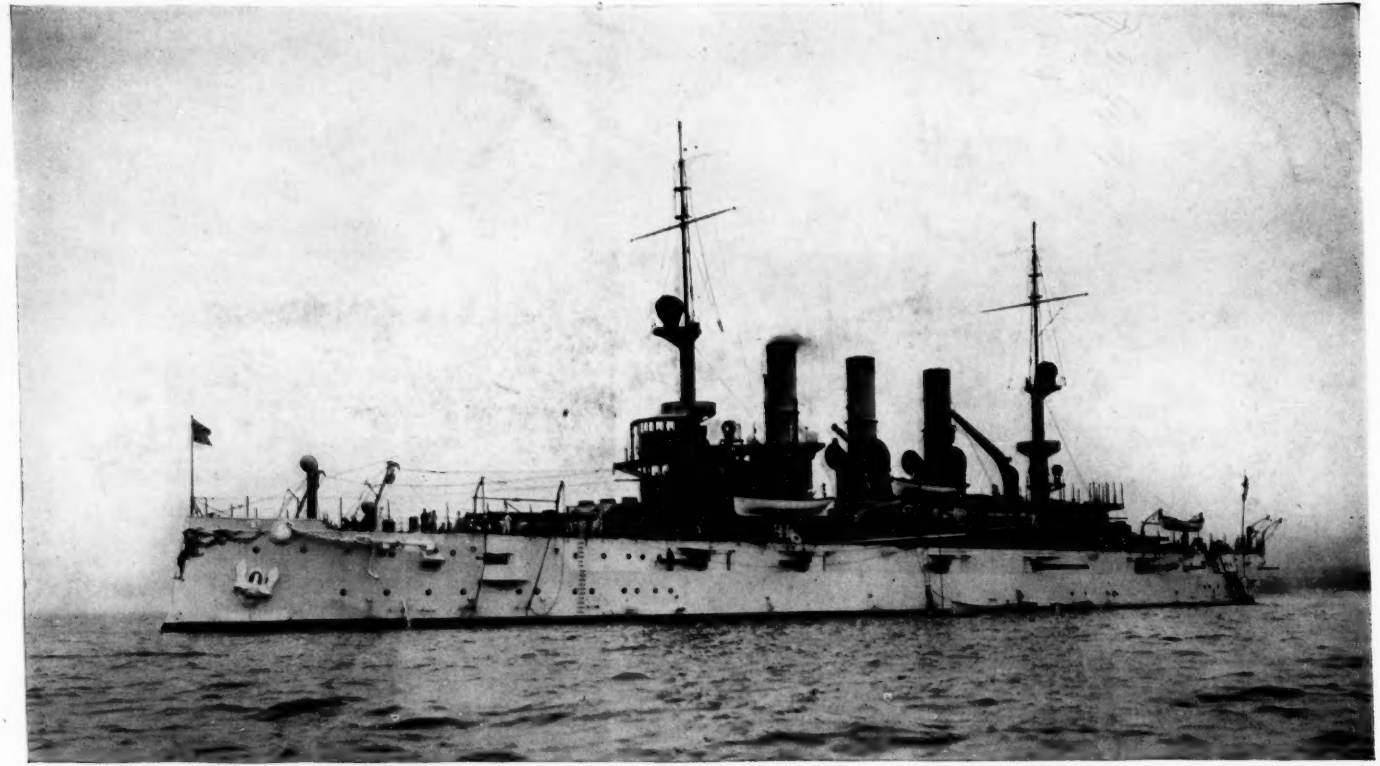

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The Royal United Service Institution,

WHITEHALL, S.W.

FORM OF BEQUEST.

I Bequeath to THE ROYAL UNITED SERVICE INSTITUTION

the sum of £ _____ (free of duty),

or (in case of a specific legacy) my _____ (free of duty),

to be applicable for the general purposes of such Institution.

And I Declare that the receipt of the Secretary, or other proper officer for the time being of such Institution, shall be a sufficient discharge for the same.

THE JOURNAL

OF THE

ROYAL UNITED SERVICE INSTITUTION.

VOL. LIV. FEBRUARY, 1910. No. 384.

[*Authors alone are responsible for the contents of their respective Papers.*]

SECRETARY'S NOTES.

I. ROYAL VISITS.

Admiral H.R.H. The Prince of Wales, K.G., honoured the Institution by a visit to the Museum on Friday, 4th February. On the afternoon of 5th February H.R.H. The Princess of Wales, accompanied by H.R.H. Prince Henry of Wales, H.R.H. Princess Alexander of Teck, and Captain H.S.H. Prince Alexander of Teck, G.C.V.O., D.S.O., visited the Museum. Field-Marshal H.R.H. The Duke of Connaught, K.G., President of the Institution, inspected the Library and Museum on Monday, 10th January, and expressed himself pleased with their condition.

II. ANNIVERSARY MEETING.

The Seventy-ninth Anniversary Meeting will be held in the Theatre of the Institution on Tuesday, 1st March, at 3 p.m.

III. VACANCIES ON THE COUNCIL.

The following are the names of the candidates nominated for the vacancies on the Council. The ballot will take place at the Anniversary Meeting :—

Royal Navy (2 vacancies).

Rear-Admiral Hon. A. E. Bethell, C.M.G., Director of Naval Intelligence.
Admiral of the Fleet The Lord Walter Kerr, G.C.B.
Lieutenant G. R. Maltby, M.V.O., R.N. (retired).

Regular Army (1 vacancy).

Major-General Sir T. Fraser, K.C.B., C.M.G., late R.E.
Brigadier-General J. A. L. Haldane, C.B., D.S.O., General Staff Eastern Command.

Royal Marines (1 vacancy).

Colonel J. H. Bor, C.M.G., A.D.C., Commandant R.M.A., Portsmouth.
General Sir W. P. Wright, K.C.B., late R.M.L.I.

IV. OFFICERS JOINED.

The following officers joined the Institution during the month of January :—

Lieutenant P. G. Huddleston, R.E.
Colonel P. R. S. Churchward, Loyal North Lancashire Regiment.
Colonel C. H. Hayes, Indian Army.
Second-Lieutenant R. H. Beadon, A.S.C.
Colonel G. Swinton, late R.E.
Major F. J. Duncan, D.S.O., Royal Scots (Lothian Regiment).
Captain E. G. Fowler, 3rd Bn. the Norfolk Regiment.
Commander J. F. Grant-Dalton, R.N.
Captain R. R. Barber, Canadian Corps of Guides.
Lieut.-Colonel G. L. Palmer, Royal Wiltshire Yeomanry.
Lieutenant K. J. Woodmass, East Yorkshire Regiment.
Lieutenant J. Macnair-Smith, R.M.L.I.
Colonel G. P. Ranken, Indian Army.
C. R. Hargraves, Esq., late Lieutenant, 13th Hussars.
Lieutenant V. G. Bowden-Smith, R.N.
Midshipman D. C. Lang, R.N.
Captain L. H. D. Broughton, R.F.A.
Lieut.-Colonel H. B. Shave, P.W.O. Cape Peninsula Rifles.
Lieutenant B. W. S. Hawkins, R.E. (T.F.).
G. D. Macrae, Esq., late Lieutenant, London Scottish Rifle Volunteers.
Major (local Colonel) E. P. Strickland, D.S.O., Norfolk Regiment.
Lieut.-Colonel Sir J. L. Walker, Kt., C.I.E., late Simla Volunteers.
Colonel E. J. Hollway, late Duke of Cornwall's Light Infantry.
Second-Lieutenant W. E. C. Terry, Oxfordshire and Buckinghamshire Light Infantry.
Lieutenant C. Gibb, Royal Scots Fusiliers.
Captain E. E. B. Holt-Wilson, D.S.O., R.E.
Second-Lieutenant R. H. Phayre, Yorkshire Regiment.
Lieutenant P. Hudson, King's Liverpool Regiment.
Colonel G. B. Smith, R.A.
Captain C. G. Jeffery, Yorkshire Regiment.
Captain J. H. Lindsay, 14th Bn. London Regiment.
Lieutenant C. F. Harris, R.N.
Captain H. R. Hayter, A.S.C.
Major W. M. Bliss, Scottish Rifles.
Second-Lieutenant G. H. Asslin, Royal Fusiliers.

In the January list, the Corps to which Major A. B. Hubback belongs should have been described as "The Malay States Volunteer Rifles."

V. ROYAL PROCESSION TO PARLIAMENT.

On the occasion of His Majesty the King opening Parliament in State on the 21st of February, the Museum will be closed to the public until after the Royal Procession has returned. Members of the Institution may admit personally two friends to the Museum. The Institution building will be open to members as usual.

VI. CONVERSAZIONES AND RECEPTIONS.

In view of applications having been received, the Council desires to intimate that the Museum is available only for Conversaziones and Receptions of recognised learned and scientific societies and similar institutions. The Theatre and a Committee Room can be used for meetings of naval and military societies and institutions, the fee being nominal.

VII. ADDITIONS TO THE MUSEUM.

(6053) Model of H.M S. *Mars*, a line-of-battleship, which was present at the Battle of Trafalgar. The Model is made of bone, and was the work of French prisoners of war.
Bequeathed by A. G. Guillemard, Esq.

(6054) Small Model in Bone, made by French prisoners, of a line-of-battleship of the commencement of the 19th century.
Bequeathed by A. G. Guillemard, Esq.

(6055) A Print in Colour by Rowlandson, dated 1798, of the Deptford Volunteer Cavalry.

(6056) The Original Plaster Cast of the Memorial erected at Sandgate to the memory of Lieut.-General Sir John Moore, K.B., who fell in action at the battle of Corunna, 16th January, 1809.
Given by the Committee, "Sir John Moore's Memorial," at Sandgate.

(6057) A Lithograph showing the uniform worn by the Staff of the Army in 1860.

(6058) A Print entitled "The Triumphal Reception of the Seikh Guns," from the picture painted by W. Taylor, and engraved by F. C. and G. G. Lewis.

(6059) Shot picked up on the deck of H.M.S. *Asia* at the battle of Navarino in 1827, and supposed to be the one which wounded Midshipman Codrington, afterwards Admiral Sir H. J. Codrington.—*Given by Staff-Surgeon B. Browning, R.N.*

(6060) Westley Richards Patent Percussion Carbine, date *circa* 1840.
Given by H. H. Harrod, Esq.

(6061) Model of H.M.S. *Mars*, a ship of the line, which was present at the Battle of Trafalgar, and which towed H.M.S. *Victory* into Gibraltar after the action. The model was built previous to the construction of the actual ship, and was given to Mr. W. J. Huggins, the artist, by King William IV., who had commanded him to paint some pictures of the Battle of

Trafalgar, which, when completed, were hung in Greenwich Hospital, but subsequently removed to Hampton Court and St. James's Palace. The model is being fitted and rigged by two members of the Museum Staff, Messrs. John Smith and John Preston (late P.O.'s, 1st class, R.N.).

Given by Edward Duncan, Esq. (grandson of Mr. W. J. Huggins).

[William John Huggins was born in 1781, and began life as a sailor in the service of the East India Company. Afterwards he settled in Leadenhall Street, near the East India House, and practised marine painting as a profession, and was in succession appointed marine painter to King George IV. and King William IV.]

USE OF SKI, AND TRAINING OF BRITISH SOLDIERS FOR DUTIES ON SNOW-CLAD FRONTIERS.

By Captain HOWARD V. KNOX.

On Wednesday, 17th November, 1909.

Brig.-General H. H. WILSON, C.B., D.S.O., *p.s.c.*, Commandant, Staff College, in the Chair.

THOUGH a knowledge of ski-ing is probably not so vital to our military interests as it is in the case of the central European Powers, with their mountain frontiers, yet the subject hardly merits the neglect which it still encounters in this country. For, after all, we have a mountain frontier in India; and instances are not wanting, as I hope to show later, where ski would undoubtedly have been of the greatest service in Indian border warfare. Unfortunately, I have never myself been in the Himalayas; but doubtless in the subsequent discussion light will be thrown on the question of the general suitability of the Himalayan region for purposes of ski-ing. In fact, the chief purpose of this paper is to direct attention to this very practical and important question, which has as yet hardly been investigated at all. But even apart from the suitability of ski to our own needs, it seems worth while, in the interests of military theory, to understand the nature of ski and the way in which they may subserve military ends. For now that the great military Powers have all taken the matter up seriously,[1] it seems certain that the use of ski must in future be an important factor in any winter campaigning on the Continent. And, finally, it is neither safe nor dignified to assume that the interest of the British soldier in future European conflicts must necessarily be of a purely academic character.

Twenty years ago the word "ski" would probably have evoked no suitable mental image for many of the people in this room—including the lecturer. The appearance in 1890 of Nansen's account of his crossing of Greenland on ski may be taken as the event which brought these Dark Ages to a close.

[1] Ski have been definitely introduced into the armies of Norway, Sweden, Russia, France, Germany, Switzerland, Italy, and Austria-Hungary. They have been experimented with in the armies of the United States and Japan.

But it is only within the last ten years or so that ski-ing has been extensively pursued as a sport outside Scandinavia. And even in these days, when its attractions are pictorially proclaimed in our railway stations, there is room for doubt as to whether many of the uninitiated have an adequate understanding of what ski-ing really is. The advantages of ski-ing are sufficiently great to free us from the temptation of exaggerating them, and we need not be afraid of admitting at the outset that even ski-ing has its limits. A short time ago, in one of our illustrated monthly magazines, there appeared a thrilling tale of a ski-runner who baulked pursuing wolves of their prey by taking a flying leap over a stockade of exceeding height. The writer had evidently heard vaguely of the wonderful jumping feats executed by Norwegian skiers, and had not grasped the fact that ski-jumping takes place down a slope. The high jump has not as yet figured as an event at any recognised ski meeting.

It is, of course, quite foreign to the purpose of the present lecture to treat of ski-ing simply from the point of view of sport. Nor do I propose to go into the technique of ski-ing. For full treatment of this side of the subject, and for advice as to choosing ski, etc., I may refer my hearers to the excellent little manual "Ski Running," edited by Mr. E. C. Richardson (2nd edition 1907). Historically speaking, it is to be observed that the development of ski-ing as a sport pursued for its own sake is quite recent. It is purely an outgrowth from the use of ski in the every-day life of the inhabitants of northern Eurasia, as a means of communication and for the pursuit of game in winter. Ski were undoubtedly devised in the first instance as a practical response to environmental conditions, though their actual genesis, in the well-worn phrase of the baffled historian, is "lost in the mists of antiquity." The chapter on "Ski and Skilöbning," in Nansen's "Crossing of Greenland," should be referred to by those interested in the historical side of our subject.[1] Here it is merely alluded to in order to dispel any prejudice that might arise from the mistaken idea that the utilisation of ski for practical purposes is only an afterthought. In reality, it is ski-ing as an amusement which was the afterthought.

It is, however, permissible to point out in passing, that, taken simply as a sport, ski-ing is unsurpassed as a means of developing all-round physical fitness, including therein nerve, resourcefulness, and eye for country. Of it Nansen says:—"I know no form of sport which so evenly develops the muscles, which renders the body so strong and elastic, which teaches so well the qualities of dexterity and resource, which in an equal degree calls for decision and resolution, and which gives the same vigour and exhilaration to mind and body alike. . . . . Where will one find more freedom and excitement than when one

[1] See also "Die Schi-Literatur," by Henry Hoek (Gustav Lammers, Münich and Vienna, 1908), a very useful bibliography in pamphlet form.

glides swiftly down the hillside through the trees, one's cheek brushed by the sharp cold air and frosted pine branches, and one's eye, brain, and muscles alert and prepared to meet every unknown obstacle and danger which the next instant may throw in one's path? . . . . There is something in the whole which develops soul and not body alone, and the sport is perhaps of far greater national importance than is generally supposed" ("Crossing of Greenland," I., 84).

The military value of ski must obviously be determined by their nature as aids to locomotion. It is therefore necessary to state precisely what their utility in this respect is. Though, as a matter of terminology, it is usual to distinguish ski from "snowshoes," the ski is essentially a long wooden snow-shoe with turned-up points. The design of the blade is slightly different in different models, but for all-round purposes the "Telemark" type is generally allowed to be the best. There is, however, considerable diversity of opinion as to the best "binding," or means of attaching the ski to the foot; but we need not go into controversial matters. The ideal binding would be (*inter alia*) both light and strong, and would also be easy to adjust. It has not yet been discovered; but each individual skier believes he possesses the next best thing to it. Whatever its other merits or defects, a binding, to be worth anything at all, must be such as to secure lateral rigidity—which is essential to control—combined with freedom to raise the heel of the boot well off the blade—which is no less essential to the proper management of the instrument.

The ski shares with other forms of snow-shoe the advantage of enabling the wearer to walk on the surface of deep snow, where a man without such appliances would find progress excessively laborious or even impossible. Its special advantage over all ordinary snow-shoes is, that it enables us, on level snow of a suitable texture, to walk, or rather swing along, with an easy gliding motion; and that in descending hills the skier is principally concerned to keep on his feet, while the force of gravity does the rest. Owing to this unique capacity for *gliding*, ski are the footgear specially indicated for hill work when the ground is covered with snow. The fortunate circumstance that snow, except when in a very unfavourable condition, yields to moderate pressure, enables the expert ski-runner, by changes of the position of his feet and body, to guide himself, moderate his pace, or pull up altogether at will. On steep gradients, instead of running straight down in the direction of the slope, he can descend in a succession of sweeping curves. In fact, an expert man has his ski completely under control—only hard ice can defeat him. Even on so-called icy snow he will get along somehow.

Needless to say, the beginner placed on a slope—especially when deprived of his pole—finds it by no means a simple matter even to remain standing on his ski. This introduces us to what —if we except the greater weight when being carried on the

shoulder—is the only serious drawback to ski as compared with ordinary snow-shoes. Without preliminary practice they are worse than useless on the hillside; but the obvious moral is, that their use should be properly taught in peace time. To this question of training I will return later. I wish first to insist on the possibilities of ski in the hands—or, to be pedantically precise, perhaps we should say on the feet—of a trained ski-runner.

The first point is, that on level ground in good snow, and still more indisputably in hilly country, ski are incomparably superior to ordinary snow-shoes. The next point is, that they are hardly, if at all, inferior even in bad snow and for uphill work. Nansen, in his Greenland expedition, took Indian snow-shoes, and also the smaller Norwegian snow-racquets, called "truger." In very loose deep snow, with the hill against them, he and his Norwegian companions seem to have found the Indian snow-shoe preferable.[1] (By "Indian snow-shoe" is meant the form used in Canada.) But, notwithstanding, he sums up emphatically in favour of ski. "Lest any reader," he says, "should be led to believe, by what I have here said about the state of the snow and the difficulties we met with, that our ski were of little or no use to us, I ought, perhaps, to state once and for all that they were an absolute necessity, that without their help we should have advanced very little way, and even then died miserably or have been compelled to return. I have already said that ski are considerably better than Indian snow-shoes, even for hauling purposes. They tire one less, both because they have not to be lifted, but merely driven forwards, and because the legs are kept no wider apart than in ordinary walking. For nineteen days continuously we used our ski, from early morning till late in the evening, and the distance we thus covered was not much less than 240 miles."[2]

As regards *terrain*, almost the only conditions in which ski are relatively unsuitable are supplied by very dense forest, or undergrowth which is at once tall and close. Large *boulders* are, of course, unfavourable to ski-ing, but not so much so as appears at first sight. Unless they are strewn very thickly indeed, a way can generally be found through them when they cannot be avoided altogether. The lower part of the Great Scheidegg—the pass leading from Meiringen to Grindelwald—looks in summer almost hopeless from the skier's point of view; but by mid-winter most of the moderate-sized boulders are covered, and one ski-es quite comfortably in and out among the larger blocks that still stand out.

Where there is a likelihood of meeting with much ground of a very unfavourable description, it may be advisable to do as is sometimes done by military ski parties in Austria, and carry small racquets—which are very light—to wear instead of ski when negotiating very bad bits.

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[1] "Crossing of Greenland," II., 42-45.

[2] *Op. cit.*, II., 55-56.

To return to the question of snow. To the man who ski-es not, nor climbs, snow is soft white snow and nothing more. To the skier, even more than to the mountaineer, snow is of an infinite variety. In its ideal condition it almost seems to have been invented for the express purpose of meeting the skier's needs. At its worst, it is never so bad as the language which it too often lets loose. It ought to be an article of faith in the ski-ing brotherhood that there is really no such thing as bad snow. Snow is always either good, better, or best. When snow ceases to be snow and becomes practically ice, it may be as well to carry the ski, and perhaps put on crampons; but with this reservation we may assert that snow conditions which retard the skier increase in far greater proportion the difficulties of the man "on foot." Hence it is only an apparent paradox to say that the worse the snow is for ski-ing, the more useful do ski become. For the purposes of this lecture, therefore, we need not go into detail about peculiarities of snow. It will suffice to point out that some of the disagreeables of bad snow may be largely circumvented by quite simple means. One of our worst troubles is that just after a snowfall, or when the temperature is close to the freezing-point, snow is apt to adhere in great masses to the bottom of the ski, adding a frightful weight thereto, and entirely putting an end to gliding. This "balling" of the snow may be prevented by "waxing" the ski, which operation, however, unless done very artfully, may make the ski so slippery that we can no longer get uphill at all. For uphill work a better preventive of balling is a detachable piece of sealskin applied to the under surface of the ski. This seems to have been the original purpose of the skin attachment as used by the Lapps and Finns, among whom the skin (of reindeer) was permanently fastened to the ski. But skins have the further advantage of enabling the skier to mount on slippery snow at a much greater angle than is possible on bare ski. The skin, being put on so that the hairs point rearwards, permits the ski to be driven forwards over the snow and, at the same time, checks the tendency to slide backwards. Many Austrian skiers keep their ski permanently well waxed, and wear sealskin the whole time except for the run down. In this way they aim, so to speak, at making the best of both worlds—uphill and downhill; but most skiers prefer the feel of the bare boards when ascending on good snow, and on a steep descent in naturally fast snow waxed ski are not always pure joy. It should be mentioned that there are other "artificial aids" besides skins; but unlike skins, they are no preventive against balling, and are not much used by practised skiers.

To complete our rapid survey of the seamy side of ski-ing, the dangers of ski-ing must next be mentioned; but this branch of the subject must be very briefly dealt with, especially as it is quite certain that the dangers of ski-ing, like those of riding, are not of a nature to weigh in the balance against its military advantages. The chief kinds of danger for the skier are these:

a. Personal injury from a severe fall; *b*. Breaking one's ski from the same cause—which may be a very serious matter on difficult ground, far from human aid; *c*. Frost-bite; *d*. Snow-blindness; *e*. Crevasses; *f*. Avalanches. Of these only the first two, namely, injuries to self and ski from falling, ought strictly to be ascribed to ski-ing, as such. The others are incidental to the climatic and geographical conditions under which ski-ing is, or may be, carried on, though, to be sure, the last named, *i.e.*, the avalanche, is more serious for a man on ski than on foot. But it is precisely injuries to self and ski that ought to be almost wholly ruled out of account when considering the use of ski in actual warfare, for we must assume that the side which contemplates using ski in winter warfare will have trained skiers at its disposal. Now, a good skier may be defined as one who never takes a considerable toss without deliberately courting it for the satisfaction of his sporting instincts. The skier out for sport or practice will naturally take risks which, in a military capacity, he should carefully avoid. For even a harmless spill—and we may admit that the most appalling-looking spills on snow are generally harmless—consumes more time than is gained by increased speed between spills, while a broken ski possibly, and a sprained ankle certainly, will put the soldier out of action altogether. The art of running safely, rather than the cult of mere speed, must therefore be the objective of military training on ski. Of course, this does not mean that straight, fast running is not to be practised at all; but only that in actual military exercises the pace at which slopes are taken must be commensurate with the skill of the runner, and that *in such exercises* a bad fall should be regarded as a military blunder.

Dangers from falls being thus practically ruled out, we pass to those which are inherent in the nature of ski-ing grounds. *Frost-bite* is a real danger, particularly when the skier is caught out in bad weather, but is one that may be minimised by the adoption of a suitable kit, especially as regards foot wear.

Snow-blindness, again, is not likely to occur when the man is provided with proper snow spectacles, as worn by mountaineers. In the absence of such glasses, a pair of leather discs, each with a narrow slit for vision, are an efficient substitute. It is not always necessary to protect the eyes on snow in this way; but the skier should invariably take snow spectacles with him on any expedition.

Crevasses only occur on glaciers and above the summer snow line, *i.e.*, in a region above that in which military operations may be expected to take place. The precautions to be adopted against them belong to mountaineering craft.[1]

[1] See an article on "Mountaineering on Ski" in the *Alpine Journal* of 11th August, 1909 (pp. 561-2). The article as a whole is worth reading, though on one or two points—notably as regards avalanches—the writer's views must be accepted with reserve. For ski mountaineering, see also the Annual of the recently founded Alpine Ski Club.

Avalanches are by far the worst danger that the skier has to reckon with. If he intends to ski in steep mountain places, he must learn to treat avalanches with respect, or his career will be a short one. It may be assumed that large bodies of troops will never be deliberately led over ground where avalanches are to the fore, and especially not under the meteorological conditions which render them probable; but the skier, in his capacity as scout, etc., may often have to venture on such places, and, of course, risks of this kind, that it would be folly for him to incur in peace time, may be quite legitimate in "the real thing." It is incumbent on the men who will act as leaders of ski parties—either in peace or war—to acquire mountaineering experience with a view to learning all they can about avalanches and mountain peculiarities in general. And even then accidents will occasionally happen. In view of the avalanche danger in particular, it is imperative that the leader should really lead, and not be a slave to the "local knowledge" of a native guide (I am not speaking of guides in the mountaineer's sense of the word), for unless the inhabitants of a mountain district are accustomed to traversing their mountains in winter, they are apt to show an undue preference for the summer routes, which are by no means always the best or safest when under snow.

The foregoing remarks on avalanches have perforce been of a very perfunctory nature. I have not even attempted to describe the different varieties of avalanche. For a rather detailed (but still brief) and scientific treatment of the subject from the skier's point of view, I would refer you to W. Paulcke's "Der Skilauf,"[1] the text-book of ski-ing officially approved for the German Army.

We may now pass to the question of speed. This is obviously a function involving, as important factors, not only the gradient and the man, but also the state of the snow. The worse the snow, the more nearly the value of ski is reduced to that of snow-shoes. In what follows, therefore, we must postulate the presence of snow in good ski-running order.

First as regards flat or moderately undulating country. Nansen asserts that a good man should accomplish sixty or seventy miles in a day, "if the conditions be moderately favourable." We learn from the same authority that the record long distance was made in 1884 by a Lapp, Lars Tuorda, thirty-seven years of age, who, in a great race, the course being laid mainly over frozen lakes, covered 220 kilometres, or nearly 136¾ English miles, in 21 hours 22 minutes, rests included. "Of the first six, five of whom were Lapps, the last came in 46 minutes after the first."[2]

Of more immediate interest to us is the average speed to be expected of the "Continental"[3] runner. Lieutenant Czant,

[1] Published at Freiburg-i-Br.: Fr. Wagner'sche Universitäts-Buchhandlung, 4th Edition, 1908.

[2] "Crossing of Greenland," I., 109-110.

[3] In ski-ing parlance, the "Continent" excludes Scandinavia.

of the Austrian Army, in his very useful book, "Militär-Gebirgsdienst im Winter,"[1] says that on fairly level ground detachments of skiers, in full marching order, will normally march at a rate of from 5 to 8 kilometres (say, from 3¼ to 5 miles) an hour. Small patrols, or orderlies, will undoubtedly move much more rapidly, though hardly at double the rate, as Lieutenant Czant claims—except for short distances.

In mountainous country, vertical rather than horizontal distance is the thing to be considered. It is usually held that it takes from one-quarter to one-third more time to accomplish a given *ascent* on ski than it does on foot when the ground is freed from snow. But in my own experience, the times under summer and winter conditions differ but little, provided that no attempt is made to press the pace in either case. The rate may be taken for the average man as one hour for every 1,000 feet of vertical distance in the ascent, including short halts, but not any prolonged rest for meals, etc. This seems to accord, too, with the experience of Captain C. Hordern, R.E., as given in an excellent paper—to which I am under considerable obligations—on "The Uses and Possibilities of Ski." A man in a hurry, however, to "do" his pass or peak in the shortest possible time—which is the normal state of mind of the youthful and inexperienced mountaineer—will make better time under summer than winter conditions. The habit of cramming on pace uphill, except where special circumstances require the effort, is to be discouraged on many grounds. It puts a tremendous strain on the man, especially if heavy laden, and throws him into a violent perspiration, so that when a halt is called he will probably be quickly chilled to the bone. A good rule is never to go so fast as to cease to breathe through the nose instead of through the mouth. A further objection to undue hurry in the ascent is that in subsequently descending the man will not be nearly so steady on his feet.

In *descending*, the limit of speed is that of a falling body, and this velocity, as Nansen says, may be sensibly approached by a good ski-runner—though it is difficult to maintain the highest rate of speed for any length of time. If the skier does not check himself, probably something else will—and more effectually. But—racing apart—I think that for the ordinary "Continental" runner an average rate of 1,000 feet *vertical interval* per ten minutes may be considered quite good. This will include short halts to reconnoitre the ground, and to make sure that one's companions are still all there. Whenever possible, we may here observe, skiers should run in groups of three or four. Eight is perhaps the largest number that can be kept well together under one leader in a long descent. For each indi-

[1] Vienna and Leipzig, 1907. Translated into French by H. A. Tanner (Captain in the Swiss Army), under the title "Alpinisme et service militaire d'hiver" (Paris and Lausanne)

vidual skier must be left plenty of room, it being practically impossible for anyone else to foresee where the man may find it necessary to make a turn. If the members of the party are running in a bunch, collisions are inevitable.

Having now, it is to be hoped, grasped the general nature of ski-ing as a means of locomotion, we shall probably be prepared to admit that, given the conditions under which ski come into play, their military value follows as a matter of course. This value has indeed already been put to a practical test. In Scandinavia, ever since the year 1200, if not earlier, ski have been employed in winter warfare. In the war between Norway and Sweden in 1808 the Norwegian ski contingent was 2,000 strong. The skiers proved, as always, of the greatest service both for fighting purposes and for reconnaissance. On the Swedish side, too, they demonstrated their utility in rear-guard actions.[1]

Instances might be multiplied where commanders have suffered owing to their being unprovided with skiers. It has been pointed out, *e.g.*, that the disaster at the Bérésina would probably not have occurred if Napoleon had had at his disposal skiers for reconnoitring and despatch-carrying, and to cover the actual crossing.

As an instance where our own troops were seriously handicapped for lack of any kind of snow-shoe, I think the crossing of the Shandur Pass by Colonel Kelly's force in the Relief of Chitral may suffice. The crossing of this pass without special appliances was indeed a wonderful performance, but it tried to the utmost the splendid men who executed it.

"Captain Borrodaile's men found the task of crossing the pass just heart-breaking; every few steps they would sink in through the snow, although some sort of a track had been beaten out by the levies going on in front. At times they would fall in almost up to their armpits, so that they had to be pulled out by their comrades. This was fearfully trying to men loaded as they were,[2] to men, too, who had passed an almost sleepless night, and started for this, the crisis of the enterprise, thoroughly exhausted.[3]

"By the time the party had reached the middle of the pass men were falling out in twos and threes, sitting down in the snow as if they were on the point of giving up the struggle. . . . . The snow was from three to five feet deep, and quite eighteen inches of it was soft and fresh; at the same time the sun was pouring down upon the men. . . . . So exhausted were the men that it seemed at one time to the British officers

[1] For a brief summary of the Scandinavian wars, in which ski have been used, see Paulcke's "Der Skilauf," pp. 136-137.

[2] "Each Sepoy was allowed fifteen pounds of baggage, and he carried a greatcoat and eighty rounds of ammunition, and wore a short 'poshtin' (sheepskin coat)," *Op. cit.*, p. 130.

[3] They had been obliged to bivouac on the snow the previous night at Langar.

that it would be necessary to spend another night in the snow, but at about 5.30 the advance guard came to the end of the flat part of the top of the pass, and the descent was at last commenced."[1]

"In the evening, on arrival at Laspur, Surgeon-Captain Browning Smith made an examination of the men who had crossed the pass, and found 25 cases of frost-bite, and 30 of snow-blindness. These were fortunately not severe, but it was evident that even one more day's work such as these troops had had to undergo would have quite incapacitated the force."[2]

On the next page the authors speak of the troops having "behind them this terrible pass, practically cutting off their retreat."

This experiment in doing without snow-shoes for snow work can hardly be regarded as justifying persistence in the old methods; for consider the geographical facts. The Shandur Pass is described by Lieutenant Beynon in his book "With Kelly to Chitral" as "a very gradual slope—so gradual, in fact, that it is difficult to say when the top of the pass is reached. This slope . . . is some five miles long, and 12,330 feet above mean sea-level; absolutely bare of trees, and with two fair-sized lakes upon its surface. . . . The lakes were frozen over, and the valley was one sheet of spotless snow, lying dazzling in the sunshine. The distance from Langar on the east to the village of Laspur on the west of the pass is not more than 10 miles, yet Borrodaile's party, leaving Langar at daybreak, did not reach Laspur till 7 p.m."[3]

It seems clear that the snow was in thoroughly bad condition, but the Younghusbands' narrative would appear to bear out the contention that snow conditions which make ski-ing unpleasant may render ordinary marching on foot practically impossible. In this particular case the impossible was accomplished; but we may with some confidence assert that the Shandur Pass would have been mere child's play to these same men if they had been mounted on skin-clad ski, or even racquets. Moreover, it can hardly be doubted that a detachment on ski, starting from Langar at the same time would have been well over the pass before the surface had been reduced to its worst condition by the action of the hot sun on the newly fallen snow. It also seems reasonable to surmise that, starting from Teeru on the previous day, they could have accomplished the entire traverse to Laspur in one stretch, without having to bivouac on the snow, as Captain Borrodaile's men had to do. The task of getting over the two mountain guns, which had temporarily to be left behind, would also have been enormously facilitated if only the

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[1] "The Relief of Chitral," by Captain C. J. and Captain F. E. Younghusband, pp. 145-147.

[2] *Op. cit.*, p. 147. The force numbered 290 men.

[3] *Op. cit.*, p. 40.

gun detachment had been on racquets. Again, with suitable equipment it would not have been necessary to divide the force, as was actually done, Captain Borrodaile's detachment being sent on in advance as a sort of forlorn hope. And finally, with proper equipment there would have been no necessity to give up a day to recuperating from the effects of the march. In 1895, it is true, the use of ski and racquets had not yet been all but universally adopted by the military Powers, so that we could not at that date be accused of being behind the times; but in the future we shall not be able to plead any such excuse.

This historical event of the crossing of the Shandur Pass has been cited primarily to illustrate the need of snow-shoes of some kind or other when military operations have to be carried out in deep snow. There is no intention of claiming that under such conditions the bulk of the troops should be on ski in preference to racquets. On the contrary, ski and racquets should probably always be used in conjunction, as is actually the practice in the Austrian and other Armies. We have seen that it is more particularly for mountain warfare in winter that ski will be really invaluable. But we have also seen that the very superiority of ski as an instrument of locomotion over all other forms of snow-shoe has as its corollary the need for allowing the greatest possible freedom of movement to the individual skier when running downhill. In descending long slopes, and still more in descending through a wood, no *large* body of skiers—unless of the stamp that we find in Norway—can be expected to combine avoidance of collisions with the maintenance of some degree of cohesion. For these reasons the chief military use of ski will be for purposes of scouting, despatch bearing, and cognate functions. In a word, the *rôle* of the ski-soldier will be to replace the mounted soldier under conditions which render the latter partly or wholly immobile. The very conditions, which even in flat country confine cavalry and ordinary infantry to beaten tracks, open up the whole country-side to the skier. Just as the "estranging" sea of the poets' fancy has been converted by hard-headed men of action into a great highway of communication, so the "barriers" of snow are seen by the skier to have been made only to be trampled on.

Since in mountainous country a very small body of men will often suffice to hold large bodies of the enemy in check, the skiers, even though few in number, will often be able to seize and hold a pass in advance of the main body. Obviously, too, they will be able to render great services in securing flanks and rear, especially (in European warfare) against harassing attacks by the enemy's skiers.

The limitation set by the preceding considerations on the number of skiers required with a given force furnishes a sufficient answer to the objections sometimes brought against the military use of ski on the score both of expense and of the difficulty in training any very large number of men drawn from populations unaccustomed to the use of ski in civil life. Similarly we

may treat as irrelevant the objection that a whole battalion on ski would occupy at least three times its normal length in column of route. None of these objections apply to the use of *racquets*: these are cheap and durable; their use can be learnt in a few minutes; and they do not entail any lengthening out of a column. The point is, that with infantry on racquets there should be a complement of skiers, for the performance of functions that under normal conditions, and in flat country, would fall chiefly to the cavalry or mounted infantry.

More serious is the objection that ski are a greater encumbrance than racquets. This, of course, applies to ski only when they have to be *carried* by the soldier in addition to his rifle, *i.e.*, when they are not in actual use. In such case the soldier might be relieved of his ski, since a quantity of ski can easily be taken on one sledge. And conversely, when—as will probably most often be the case—the skier will be required for purposes of observation and communication, rather than as a rifleman, it seems permissible to cut down his fighting equipment in order to secure the maximum of mobility.

The foregoing general principles as to the tactical employment of ski-soldiers underlie the training which they receive in foreign armies. Broadly speaking, in those Continental infantry regiments that are specially prepared for mountain warfare, from two to four men per company are annually trained on ski, these men being carefully selected for physique and intelligence. It is not intended, I believe, to take them away from their regiments in war time; the regiments will simply furnish the details as required for special services.

Switzerland is not really an exception, for though the infantry are not under arms in the winter, ski-ing has of late years been taken up by the mountain-folk to such an extent that the Government can count upon having in time of war as many skilled skiers among the rank and file as they will require. But voluntary ski-courses were officially instituted in 1907 for the instruction of officers and non-commissioned officers, and are well attended. Also, the men on permanent duty in the St. Gotthard Forts are on ski for nearly half the year. Indian snow-shoes and racquets are also served out to these troops.

The two countries whose experience will probably be of most use to us if we ever make up our minds to try this new thing—new to us, I mean—are Norway and Austria. The Norwegians will probably always hold the field as exponents of the art of ski-ing, and it is from them that we shall best get hints as to equipment, methods of camping in snow, utilisation of horse-traction where possible—and in short all the divers tricks of the trade. But the country in which the Norwegian military ski-exercises are usually carried out is not of a truly mountainous description, as is the Tyrol, and indeed the greater part of Austria proper. In Austria mountaineering is the most popular sport, and this has paved the way for the development of ski-mountaineering, both in civil and military life. In fact, the Austrians may be said

to have made quite a speciality of ski-ing on ground that is too steep for comfort—redressing the balance by the excellence of their mountain "huts." The Norwegian on a steep slope is still better than anyone else in the same predicament, but he seems to prefer slopes where he can (apparently) throw prudence to the winds.

Again, there is one thing—most necessary to us—in which the Norwegians have practically no experience, and that is the instruction of grown men who have never learnt to ski. It is therefore to other countries that we must turn to see what can be made of the raw material for military purposes, and what are the best methods of training.

Very few men who have put off learning to ski till they have out-grown petticoats will attain the highest standard of excellence. But, on the other hand, there does not seem to be any other first-rate sport in which a learner of mature age can so rapidly attain a fair degree of proficiency—a degree amply sufficient for all ordinary military purposes. Up to the age of 55 at least men can learn to ski well enough to qualify themselves for long expeditions, and men under 30 should reach that level with very few days' assiduous practice under a good instructor. Taking classes of about twenty men, Austrian experience shows they can be turned into ski-soldiers in a fortnight.

Lieutenant Czant, in the book I have already referred to, has drawn up the following programme for a fortnight's recruit instruction in the field.[1] (He postulates previous "theoretical" instruction in the barrack-room.)

First six days, during which light equipment only is worn: beginning on the flat, the men are taught how to stand, walk, and turn; next, on slopes of from 15° to 20°, standing, walking, turning [standing, or kick-turn], gliding, braking, getting up after falls; next, on slopes up to 35°, the same exercises, with practice in descending a hill obliquely, and turning while gliding.

Seventh to tenth days: same exercises as before, on slopes up to 45°.

Eleventh day: the same, on slopes up to 50°, if the state of the snow permits.

Twelfth day: same exercises, combined with practice in taking cover and firing on ski—standing, kneeling, and lying.

Thirteenth and fourteenth days: marching at the double, with perhaps a night exercise.

Finally, there remains the question: What facilities are there for training our own troops on ski? Of the Himalayas, as I remarked at the outset, I cannot speak from personal experience; but it appears from a letter written by an officer and

[1] There is not as yet any official manual of ski instruction in the Austrian Army.

published in the "Year-book of the Ski Club of Great Britain" for 1905, that in parts of the range, at any rate (*i.e.*, in Kashmir), good ski-ing may be had up to the beginning of June at heights of 10,000 feet and upwards.[1]

Two years ago the telegraph department in Kashmir laid in some pairs of ski with a view to utilising them in keeping the telegraph line open between Srinagar and Gilgit during the winter. It must be confessed that the department has been extremely reticent as to the results of this experiment; Mr. E. C. Richardson (who was instrumental in procuring the ski) tells me he has received no information relating thereto. But as the men employed in the work of repairing the line are coolies, the department was not, I gather, over-sanguine at the outset. The coolie, I am given to understand, is not exactly the right sort of material out of which to fashion a dashing ski-runner. He would probably be averse to exposing himself to unfamiliar risks on so new-fangled a contrivance as ski; he would most likely prefer to go on being killed by avalanches in the way he has grown accustomed to.[2] As far as one can judge from a distance, it certainly appears as if, with the right sort of men (say, with Gurkhas), and with capable instructors, a great deal could be done in the ski-ing line out there.

It is undoubtedly in connection with the Indian Army that ski-ing has most importance for us. But there are other contingencies that, perhaps, ought not to be overlooked altogether, and in view of these it may be pointed out that it is quite possible to learn ski-ing in the British Isles. In the Scottish Highlands, in particular, ski-ing seems to have quite caught on. There is even a flourishing "Scottish Ski Club," numbering over 100 members.[3] From our present point of view special interest attaches to the experiment of Brigadier-General Malcolm, D.S.O., Commanding the Cameron and Seaforth Brigade of Territorials, who has distributed several pairs of ski among some of his companions in the Grampians, and in the two winters before last instructed a good many of the men in their use.[4] He informs me that "the young fellows took to it keenly," and they seem to have made good progress. May we hope that the matter will not be allowed to rest there? What is possible for Territorials should surely be possible for Regulars.

Captain J. B. WROUGHTON (2nd Battalion Royal Sussex Regiment):—I have had eight years' experience of ski-running, and have always contended that ski-ing is of interest to the British Army, and that is my excuse

[1] *per contra*, see the "Year Book" for 1908, pp. 49-50—Letter to the Editor from Captain C. Kirkpatrick, The Guides, on "Ski-ing in India." The Editor appends some comments.

[2] On the passes in question 200 lives were lost by avalanches in 15 years.

[3] See "Year-Book of the Ski Club of Great Britain" for 1908, p. 6.

[4] *Op. cit.*, p. 14.

for making a few observations on the excellent lecture we have listened to this afternoon. The lecturer mentioned the advantages of ski-ing as being "sufficiently great to free us from the temptation of exaggerating them." This reminds me of a statement I once heard made when I was urging the utility of ski for military purposes. It was gravely suggested that a large body of soldiers on ski might have considerable effect on the tactical situation if they could charge down on the enemy's flank at the rate of 50 miles an hour. Here indeed is a case of preserve us from our friends, for I am sure no one will expect skiers to practise "shock tactics." It seems clear that the real utility of ski will be found, as suggested by the lecturer, in carrying out the duties of scouting, dispatch riding, and cognate functions. After giving us the historical event of the crossing of the Shandur in 1895, Captain Knox mentions that "at that date" ski had not been universally adopted by the military powers and so "we could not be accused of being behind the times." I can give an instance of much more recent date—1907 (by which time the use of ski *was* recognised by all those armies the lecturer has mentioned). In October of 1907 when the troops from Chitral had to cross the Lowardi Pass, thirteen lives were lost. Here, as one writer stated, it was necessary to push on before the pass became blocked with snow. Had the garrison been skiers they would have welcomed the advent of snow; "the more snow the better" is what all ski-runners will say. I have noticed that the ski-tracks (spoor) of even a small party quickly harden, and I have myself walked along such tracks with ease, when to move off them in the smallest degree resulted in my sinking up to the knees in snow. I should be glad to hear the lecturer's views as to what extent a large ski party would harden the snow sufficiently to allow the passage of heavily laden pack animals. Captain Knox has mentioned the fortnight's training of the Austrian soldier, and I can bear testimony to the thoroughness of this instruction. Before the end of the fortnight most of the class can make the "telemark" swings to the right and left, and make wonderful good practice running down hill over difficult ground. The practice in the Austrian army of using ski in conjunction with "rackets" mentioned by the lecturer, is one which is not universal, for though I have seen men of the Kaiser Jäger Regiment from Innsbruck on ski almost daily during my winter leave this last two years, I have never seen a pair of snow shoes used. If "rackets" have been issued to this regiment they must be kept, probably, well oiled in the mobilisation store. A very good place, too, for I consider the long ski must always be infinitely preferable to the foot-slogging snow shoe.

Lieut.-General H. D. HUTCHINSON, C.S.I.:—I cannot speak with authority on this matter because I have no practical knowledge of ski-ing, but in speaking of the training of British soldiers for duties on snow-clad frontiers the lecturer alluded particularly to the frontiers of India, and to the value to Indian troops of knowing how to use the ski. It is quite true that India has snow-clad frontiers, but they are very remote indeed from any cantonments where British or Indian troops are stationed. Except, perhaps, in the Valley of Kashmir, during the winter months it would be practically impossible to provide opportunities for the training of troops in India. And even if trained, the occasions when the ski could be used by troops of the Indian army would be very rare. I have been twice engaged in operations in snowy countries: once in the Valley of Chitral, where we spent a year, and once with the 32nd Pioneers for

a whole year on the Sikkim Frontier, where we spent the winter at a height of 12,600 feet above the sea. There possibly if we had possessed skis, and known how to use them, they might have been useful; but unless the troops had been trained beforehand in time of peace, of course opportunities of this kind could not be made use of, and it is practically certain that the training could not be arranged. There is only one other remark I wish to make, and that refers to snow blindness. Anybody who has been much in snow knows how easy it is and how distressing to suffer from snow blindness. In Sikkim we had many severe cases of snow blindness. Of course tinted spectacles or goggles ought always to be provided and worn when you are working or travelling in snow, but you have not always got them. We found out by experience a very simple substitute worth knowing if you happen to be in snow without spectacles. It is just charcoal paste mixed with oil and smeared on the cheek bones below the eyes, and on the sides of the nose. This simple precaution is an efficient protection against snow blindness. A regiment on parade decorated in this way, especially when the men enter into the spirit of the thing and add fancy moustaches, etc., presents a remarkable appearance; but I have seen this expedient adopted in snowy regions, and I can vouch for its being effective.

Captain H. V. KNOX:—I have really nothing to say in reply, but I should just like to thank Captain Wroughton, whom I have not seen before, but whom I have often wanted to meet. I myself rather doubt whether ski can be used to beat down snow sufficiently to allow infantry to pass over it afterwards. The extent to which snow beaten down by snow shoes allows infantry afterwards to walk upon it is very largely a matter of how much the man making the tracks has sunk through. Racquets would in any case be better than ski to enable men to walk in the track afterwards. A man on racquets does a little work in beating down soft snow for men behind him, since he sinks through the snow a little. In Austria experiments are occasionally made, but not often, with racquets, and even ten or a dozen men on racquets do not beat the snow sufficiently for men to follow on afterwards without sinking through still further. I hope in a year or so to make some experiments myself in that matter.

The CHAIRMAN (Brig.-General H. H. Wilson):—It lies with me now to sum up. To me this ski-ing, which I have been at now for some years, has a sort of Pickwickian flavour. You remember how good Mr. Pickwick was when he went sliding, and you can imagine how good he would be on ski. You can imagine Mr. Winkle on the ski. Imagine Mr. Micawber, who was always waiting for something to "turn up," if he had put on a pair of ski and put another pair on Mrs. Micawber, they would not have had to wait more than a minute or two, for something would infallibly have "turned up." My own experience is this, that you can leave London in snow and sleet and fog at half-past two on one day and be in the most glorious sunshine the following afternoon at tea time, on ski, or on your head, or any other part of your person you prefer! That can be done at any time you like in January, February, or March. With regard to the military value of the ski, I quite agree with the lecturer; it seems to me its uses will be almost entirely confined to scouting. A few scouts might certainly work the ski to great advantage. I also agree with something the lecturer said in the very opening sentences of his lecture, where he stated that it was neither "safe nor dignified to assume that the interests of the British soldier in future

European conflicts must necessarily be of a purely academic character." I should like to add to that "And confined to this country," as so many people seem to suppose will be the case. We have fought in Canada before; we have fought in the Valley of the Danube before; we have fought in the Low Countries and in Spain before; and for the life of me I cannot see why we should not fight there again. In those countries there is no doubt you can do some ski-ing. Last year I was in the Lisaine Country, where General Bourbaki carried out his fateful compaign in a bitter cold and snowy winter, and undoubtedly we could work the ski well all over that country, so that from that point of view I think it is well worth our while practising. We can practise a little in this country, we can practise a little in Canada, and we can practise a little no doubt in the North-West. Those are the only remarks I have to make, except that I am sure you will join with me in thanking the lecturer for bringing forward such an interesting topic.

THE ARMY AS A PROFESSION

By Major A. B. N. CHURCHILL, p.s.c., Reserve of Officers
(Gold Medallist, Royal United Service Institution).

On Wednesday, 1st December, 1909.

The Right Honble. Viscount MIDLETON in the Chair.

THE subject which I have the honour to put before you for your consideration this afternoon has been described by Adam Smith as "certainly the noblest of all professions." Why is this so? Is it not because it is demanded of those who embrace the profession of arms that they should subordinate all personal interests to the public weal, and be ready at all times to give their lives for King and Country? Von der Goltz writes: "It is required of an officer that, in the interests of his service, he should forego personal advantage, lucre, and prosperity." A writer signing himself "Reserve" in a recent article in the *National Defence Magazine*, stated that "the number of those who join the Army for the honour and glory of serving their country is small indeed." Whether this is so or not, it is evident that among the large number who annually receive His Majesty's commission, such a motive will not be present in each individual in like degree. We may well admit with the author of "National Life and Character," that "a great many various motives contribute to form even a modern patriot"; but it is well to remember that the same writer states also that "in some particulars a lofty feeling of patriotism has become more possible now than it ever was in past centuries." In what section of the community do you expect to find the highest development of this lofty patriotism if not in those two great Services consecrated to the pursuit of arms?

A high and noble ideal must animate those who engage into this noble profession or it is one no longer. It is very necessary, therefore, to provide for that education within the Army which inculcates and fosters the sentiment of which we have spoken. While not less important is the development of that public spirit in the Service which wages ruthless war against all which savours of egotism, which is, in the words of Von der Goltz, "beyond all doubt the most bitter enemy of the qualities essential to the officer corps." In the British Army we have in *esprit de corps* an edu-

cational factor of potent force and inestimable value; it is remarkable how quickly and effectively the young officer comes under its sway: there can be no doubt that at all events during his early years of service the officer learns to merge self in his regiment.

The longer the individual serves, the higher he advances in the Service, the more onerous and responsible the duties he is called on to carry out, and especially when he is called on to face the enemy, the greater the need that he should be fired by the sentiment of this high ideal. Personal advantage, lucre, and prosperity are not easier to forego as years advance, but very much the contrary. Thus it must be realised that the officer corps, to once more quote Von der Goltz, "has a certain character reminding us of the Orders in the heydey of their existence. It ought to be a real chivalry." What killed chivalry and what resulted therefrom? Sir Walter Scott tells us in his introduction to "Quentin Durward": "The scene of this romance," he begins, "is laid in the fifteenth century, when the feudal system, which had been the sinews and nerves of national defence, and the spirit of chivalry, by which, as by a vivifying soul, that system was animated, began to be innovated upon and abandoned by those grosser characters, who centred their sum of happiness in procuring the personal objects on which they had fixed their own exclusive attachment. The same egotism had indeed displayed itself even in the more primitive ages; but it was now for the first time openly avowed as a professed principle of action. The spirit of chivalry had in it this point of excellence: that, however overstrained and fantastic many of its doctrines may appear to us, they were all founded on generosity and self-denial, of which if the earth were deprived it would be difficult to conceive the existence of virtue among the human race." He points out the prominent part played by Louis XI., and how that he possessed to a great extent that caustic wit which can turn into ridicule all that a man does for any other person's advantage but his own, and was therefore peculiarly qualified to play the part of a cold-hearted, sneering fiend. He shows "how the principles of chivalry were cast aside and their aid supplied by baser stimulants. Instead of the high spirit which pressed every man forward in defence of his country, Louis XI. substituted the exertions of the ever-ready mercenary soldier." I submit that the views of this great writer are worthy of deep consideration in an age when in all walks of life, puffing, thrust and self-advertisement are rife—and seem to pay. It is impossible that the profession of arms should not become tainted with the fell disease of egotism, unless the sentiment which opposes it is inculcated. More especially is the danger great when special efforts are directed to making the service of arms more and more of a profession, using the word in its more commercial sense.

In the consideration of the Army as a profession I therefore, in the first place, lay the greatest stress on the necessity for the maintenance of that high ideal by which alone it takes

rank as the noblest of all professions, and deprived of which it is debased to the career of a modernised mercenary. I urge that the sentiment which nurtures this ideal is of delicate structure, and that the cultivation and development of this sentiment must be studied and not treated with indifference; and lastly, that if you abandon that which does and will produce this sentiment, you do so at a great peril. In the words of Lord Wolseley: "The Army is governed largely by sentiment. . . . You cannot flout the sentiment of the Army and not injure its *moral*."

The Source of Supply of Officers and Method of Selection.

I now ask you to consider the sources of supply and methods of selection adopted for recruiting the officer corps; and in this connection I propose to specially bring under review the subject of the shortage of candidates for the Army Entrance Examinations. The source of supply for officers in the opinion of Von der Goltz is as follows:—"Only such fractions of the population as are not, by reason of their vocation, compelled to prefer personal advantage to great and public ends, are fitting persons to recruit the corps of officers." In this country it was laid down by the Dufferin Committee in 1868 that the main principle is to secure a youth who has had a thoroughly well-grounded liberal education as an English gentleman. This principle has been endorsed by all subsequent committees which have dealt with the subject.

In later years this principle finds expression in the desire to obtain such youth direct from the public schools, and shortly after we find the term public school defined as meaning not a few of the more important schools, but all schools of a public character giving secondary education. The result of the measures taken by the Military Authorities and the Civil Service Commissioners were so successful that while in 1888 not more than 33 per cent. of the successful candidates for Woolwich came direct from the public schools, and not more than 12 per cent. in the case of Sandhurst, the figures had risen, so that for the years 1896 to 1900 they stood at 78·7 per cent. for Woolwich and 55·4 per cent. for Sandhurst.

During these years you will find a very close relationship existing between the Military Authorities and the Civil Service Commissioners; so much so that in 1896 the latter took over much of the clerical work connected with the Entrance Examinations, which up to this time had been carried out by the military department, and at the same time an Order in Council was published by which the Civil Service Commissioners were constituted the advisers of the Secretary of State for War on educational matters. During the same period the Military Authorities will be found pressing for a higher educational standard, notably in respect to modern languages and science; but considerable difficulties were experienced by them in securing the necessary

co-operation of the Headmasters of the public schools. With this important qualification, the military authorities and the Civil Service Commissioners were fully satisfied with the working of the system in force, and up to 1898 the standard steadily improved.

In 1901 the Akers-Douglas Committee considered among other matters this educational question. The report of this Committee led to very drastic changes being introduced, and one of the very first results was to rupture the very happy and close connection which, up to this time, had subsisted between the Military Authorities and the Civil Service Commissioners. The latter now ceased to be the educational advisers of the Secretary of State for War, and a newly-constituted Advisory Board took their place.

From an educational point of view the alteration made was of very far-reaching import. It may be doubted if the full consequences of the change made are yet realised; and the wisdom of the change is certainly debatable. Another great change to be noted is a departure in the policy hitherto pursued in connection with the public schools. The syllabus of the examinations are now framed so as to force the hands of the public schools in the matter of education. The new policy may be highly advantageous, but you have also to consider the merits of the means adopted to give effect to it. The view of the India Office, who had to consider this question, because the examination for admission to the Indian Police always is made to follow the lines of that laid down for Sandhurst was to this effect.

"This is an innovation of great importance which will no doubt make its influence felt on the system of education in public schools; but at the present time there would seem to be reasonable ground for apprehending that the enhanced value given to modern languages at the expense of classics, if embodied in the scheme for the police examination, may have an unfavourable effect in regard to candidates from the public schools who have pursued the ordinary classical course. It is interesting to note that in the case of Woolwich for the years 1905-08, there is a falling off of 18 per cent. in the direct candidate from the figures for 1896-1900. It is not so easy to determine the figures for Sandhurst, but the fall is probably even more pronounced. The fall may, however, be due to other causes to be noted later on."

The third and last change to note, introduced by the Akers-Douglas Committee, was a qualifying examination. This examination is of a quite different nature to the old qualifying examination abolished in the early nineties. Briefly, the examination consists of two independent and distinct parts. A candidate must either obtain a "leaving certificate," which is only obtainable at those schools which conform to certain educational requirements, or he must obtain a qualifying certificate at a special examination. The official view of the Army Council

in 1904 was as follows—please bear in mind the great object is to secure a youth direct from the public schools—"The examination for qualifying certificates may be considered to form part of the entrance examination for the Royal Military College and the Royal Military Academy, and need not require the same standard as that for leaving certificates. It has been decided to allow candidates who hold "leaving" certificates to be exempt from this portion of any entrance examination, as they will have passed a higher test."[1] So you see the Army Council there proposed to encourage a youth to pass from a public school by requiring him to undergo a more difficult test. You will not be surprised to find now a falling off in the candidates passing direct from the public schools.

However, educational experts hold very strongly the opinion that the qualifying examinations are so stiff that candidates become discouraged and give up the attempt; great objection is also taken to the dates fixed for these examinations as being inconvenient, more especially the September examination. Please examine the statistics I have prepared. You surely must admit the force of that opinion which holds that the shortage of candidates for the entrance examinations is an educational matter, entirely due to the methods in force with respect to the conduct of the qualifying examination.

It is well known that the Civil Service Commissioners conduct, and have long conducted, the competitive examinations for admission to Woolwich and Sandhurst. Now, when this qualifying examination was introduced, the Army Council were most anxious that the Civil Service Commissioners should carry out the examination. This, however, the Civil Service Commissioners found themselves unable to do. Most interesting and instructive is the correspondence on the subject recorded in the Parliamentary Papers; but I cannot dwell on it here. The net result has, however, been that the Army Council has taken on its own shoulders the conduct of this examination. In order to assist the Army Council, the London University has stepped in to afford facilities, but nothing more. This has led to the erroneous impression on the part of the public that the University carries out the examination. This is not the case: the selection of the examiners and everything of an educational nature connected with the qualifying examination is under the control of the Army Council.

I will now read to you the views of an educational expert on the work of the examiners in this Qualifying Examination:—"The Army Qualifying Examination, as at present conducted, shows no appreciation of the real intentions of the Army Council, who drew up the scheme for the education of Army candidates,

[1] This War Office letter and the reply thereto by the Civil Service Commissioners is given in Appendix I.

and the mathematical training required for the Qualifying Examination is in marked contrast to that required for the Army Entrance Examinations. The questions set in the subject mathematics in the Army Qualifying Examinations are, for the most part, extremely artificial and theoretical in character, while the practical side, which was intended to be the prominent feature, is most conspicuous by its absence. While the Army Entrance Examinations (that is, those conducted by the Civil Service Commissioners) have set the pace in the teaching of elementary mathematics, the Army Qualifying Examinations either ignore this development or show no appreciation of its purport. It is surely time that a little more continuity were introduced into these examinations." There is something very comical in this criticism; the author is apparently unaware that it is the Army Council which is conducting this Qualifying Examination. If his views are correct, he shows that the Army Council lacks the practical experience to give effect to its own decisions; while the Civil Service Commissioners, who have been set aside to make room for other advisers, are seen to be well in the forefront, setting the pace in the direction the Army Council itself desires, but is apparently unable, to do. I would ask you to specially notice this situation as an illustration of a system to which I shall later invite your attention. The Civil Service Commissioners, the great expert and specialist body in all that concerns the conduct of public examinations of the State are set on one side to make room for newly-constituted bodies which can lay no claim to approach the unrivalled knowledge and experience possessed by the Civil Service Commissioners.[1]

Lastly and briefly I must call to your attention the numbers annually required to fill existing vacancies. These numbers vary considerably in different years, but at the time of the Sandhurst Committee, 1899, the estimate was 500 per annum, in 1901, at the time of the Akers-Douglas Committee, the number quoted was 800. Of the numbers required at the time of the Sandhurst Committee the Woolwich and Sandhurst establishments could only provide for 350, the remaining 150 had to be obtained elsewhere. You must bear this in mind when you judge of the educational attainments of the Army officer. It is not a good policy for the State to be at pains in demanding high educational attainments from a portion only of those who recruit

[1] The lecturer here pointed out that the authority immediately responsible for the Qualifying Examination was the Qualifying Board. This body is formed by delegates from those educational bodies authorised to grant "leaving" certificates, under the Presidency of Sir Henry Craik, who is also a member of the Advisory Board. The Qualifying Board are, however, strictly bound by the syllabus which has been drawn up by the Advisory Board. The Advisory Board, if referred to, say that the Qualifying Board are responsible for the examination; the latter, when approached, state that their hands are bound by the Advisory Board.

the officer corps. It must provide the means for the proper education of all. This, I understand, has now been done; the accommodation at Woolwich and Sandhurst has been largely increased, and it is, I believe, the intention to obtain the balance of what these institutions cannot provide from the Universities. But this is the result of the South African War. At the time of the war contempt and ridicule were heaped on the officer of the Regular Army by the British public most unjustly, and the memory of it still rankles. The Regular officer, and for that matter the Regular soldier, as little merited the public scorn as did his predecessors a hundred years ago, and the observation made by Sir William Napier is as applicable to the present time as it was in the past: "very subject to false impressions are the English; and being proud of their credulity as if it were a virtue, they cling to error with a tenacity proportioned to its grossness."

Prospects of the Officer's Career.

I now turn to the consideration of the prospects of an officer in the Army. This portion of our subject falls under two heads: the military aspect and the monetary aspect. I take the latter aspect first, and come to the question of pay. I will not dwell on details; you will find given in a tabulated form the various rates of pay for the different ranks of the regimental officer, together with the scale of pension.

In the Army at the present time the opinion is strongly held that the pay in insufficient. The first step in the examination of this question is to fix a standard. I submit for your consideration that formulated by Von der Goltz: "An existence free from care—yet no more than this—should be secured to officers by the State in its own interest." You have next to consider the average means of the youth you desire to attract to the Service, together with the expenses of that social status it is desired that he should keep up in the Service. Investigate existing conditions. Certainly a young officer cannot meet the expenses of his position on his pay. The addition to this pay which he requires in order to live free from care will be found to vary considerably according to that branch of the Service and the regiment in which this young officer is to live. Leaving out of consideration those regiments in which expenses are known to be high, and confining our attention to the infantry, the important part because of the large numbers affected, the case is not overstated, if the sum of £100 a year is fixed as the amount over and above his pay which the young officer must possess in order to live free from care. We thus arrive at the sum of £200 a year as the minimum cost of living in a British infantry regiment. Is this scale of living too high or not? The public will certainly have a voice in this decision. Those who consider it too high must state by how much. The extent to

which the State fails to meet its obligations in its own interest can then be determined in the case of the young officer. The case of the higher ranks needs, of course, similar consideration.

We have seen that the State has clearly defined the source of supply it desires to tap: "A youth who has received a liberal education as an English gentleman"; in other words, the youth educated at "schools of a public character giving secondary education!" The parent, then, of a youth so educated, who puts his son into a British infantry regiment, must, we see, be prepared to allow his son from £100 to £75 a year until his son attains the rank of captain. If the allowance then ceases, the son is no richer than the day he first joined the Service, and he receives no addition to his income till he reaches the rank of major. The prospect for the son is not too encouraging; but what about the parent? Does not the average parent who educates his sons at our public schools and universities find the expense of education a severe tax, more especially if his family is a large one? Does he not look forward to a time limit, to the day when the son is in a position to support himself? Is this average parent in a position to incur the expenses of placing his son in a British infantry regiment? As you answer these questions so you will decide whether the declaration of the State as to its source of supply of officers is true or misleading, and whether its intention would not be more accurately described by the words: "A youth who has received a liberal education as an English gentleman possessed of a private income of not less than £100 a year."

A comfortable theory, characteristic of British public opinion, exists that it does not matter what you pay your officers, you will always be able to get what you want. This idea is based on the fact that the fascination of the profession of arms, the brilliant vistas which its pursuit discloses to honourable ambition, will attract all that is best and noblest in the youth of a nation. But this condition presupposes that insuperable difficulties are not opposed. Examine existing conditions. Take the case of the cavalry, in many ways the most attractive branch of the service. Speaking generally, no competition exists for commissions in British cavalry regiments. Turn to India, you find the situation completely reversed: competition for appointment in the Indian cavalry is very keen. Look at the lists of cadets passing out of Sandhurst, you cannot fail to be struck at the large numbers of cadets who secure a high place, who elect to serve in the Indian Army.

Again, are there not many who accept commissions in British infantry regiments merely with the object of using such regiments as stepping stones to certain better paid but less martial corps and departments, who draw their supply of officers from within the Army? Is it not clear that insufficiency of pay at the present time most prejudicially affects the British cavalry and the British infantry. It is a fallacy to suppose that it does not matter what is paid to the officer—it is

correct what Von der Goltz has written, that it is to the interest of the State to secure to its officers freedom from care.

Peculiar emphasis is placed on the situation by the fact that quite recently the Indian Government has substantially increased the pay of officers in the Indian Army. It is also important to remember that public opinion has insisted that the officer should look on his career as a serious profession.

Formerly the law of compensation prevailed. If the officer was poorly paid he had the advantage of some leisure. This compensation he no longer possesses. The officer now works hard, and he looks on his profession with more of a business eye than heretofore. He now expects the State to more nearly requite him for his labours, and to abate in some measure its demand that he should pay for the high privilege of serving it, as he so long and thanklessly has done.

It has been suggested that present difficulties would be resolved if the pay of the junior ranks were increased by a corresponding reduction in the emoluments of the higher ranks. To those so minded I would recall to recollection the recently published remarks of General Sir Henry Brackenbury, where he writes as follows:—"I doubt if it is realised by the public generally how great are the difficulties of a military career to an officer who is not possessed of private means. It would have been impossible for me to take a Major-General's command at home or in the Colonies, involving, as it would have done, furnishing a large house, buying horses and carriages, and setting up an expensive establishment for a maximum of five years." Very significant are those words "or in the Colonies" —Colonial allowances are often but a bare pittance.

I pass now to the consideration of the military prospects of an officer's career. There are four ladders by which the young officer may mount to secure those prizes offered by the military profession. First, you have the ladder which belongs to the Staff of the Army; then the ladder of travel and adventure offered by Colonial employment; next, the scientific ladder which leads to the manufacturing department; while lastly there is the regimental ladder, which, so far as the ideal is concerned, should specially commend itself to those ambitious of becoming leaders of men. If in imagination you could descry all young ambitious officers setting out to mount the ladder of their choice, how many would be found congregated round the regimental ladder? Thirty years ago keen young officers were advised if they wanted to get on in the Service to devote themselves to their regimental work and seek to be well reported on by their commanding officer. This advice needs qualification at the present time. If a young officer is ambitious he must go to the Staff College or obtain Colonial employment; his prospects will be bad no matter how able a regimental officer he becomes if he elects to stay in his regiment. To advance in the Service he must leave his regiment. It is thus seen that military and

financial considerations both lead him away from his regiment. The seriousness of the existence of such conditions cannot be over-estimated. It is the regimental officer who has to fill the most trying situation in life— namely, in the face of death, called on to lead a mass of men and still preserve influence over them. The regiment is the school in which the leaders of men are best trained; it is a fatal error to allow the career of the regimental officer to suffer disparagement, for when war breaks out it is the regimental officer who bears the heat and burden of the day. The tendency of modern warfare is to place the issue of the battle, and thereby the fate of the nation, more and more in the hands of the squadron leader and company commander.

The door is now held widely open by which officers of educational attainments, combined with soldierly qualifications, can secure access to the ladder of Staff employment. Recent changes have greatly improved the prospects of Staff officers: the recognition of merit and the advancement of deserving Staff officers has been somewhat loudly proclaimed, but the means afforded to carry intent into practice, as is not unusual, seem inadequate, while some of the measures adopted seem to prejudicially affect the interests of the regimental officer. An element of uncertainty has been added which does not produce a general feeling of contentment.

Officers who obtain Colonial employment frequently secure the good fortune of seeing active service. The conditions of life are frequently hazardous, nearly always trying, but the opportunities for distinction are great. Officers who secure such appointments have good prospects. Such often in later years return to their regiments, where they prejudicially affect the careers of their brother officers. The element of uncertainty is again introduced with its attending ills.

Officers of scientific attainments who desire to specialise in that direction will find the Ordnance College and the manufacturing departments in all respects a favourable field for their labours.

Realisation.

Such, briefly, are the prospects of an officer's career. What, we now ask, are its realities? If you go out into the Army will you find that a spirit of contentment pervades the body of officers? A very striking prediction in this connection was made upwards of six years ago by Lord Wolseley in his memorable speech in the House of Lords. He then said: "I have been told that the new proposals were based upon a system under which the Navy is administered by a Board. Not being a sailor I am incapable of expressing any useful opinion upon the system upon which our Navy is managed. I emphatically pronounce it to be entirely unsuited when applied to the government of the Army, and that under it you will never have an efficient, and I doubt much if you will ever have a contented, one." What did the officers of the Army lose when the new

changes were introduced? They lost practically all that delicate structure which promotes the sentiment of high ideals and which opposes egotism—a work brought to a high state of perfection by His Royal Highness the late Duke of Cambridge—a work too little known and appreciated by the British public. It would be quite easy to particularise, but I will only instance the loss of the right of approach through the Military Secretary direct to the Commander-in-Chief, which was the cherished privilege of any officer however insignificant. Such an officer, if his cause was just, was assured of full redress, no matter how potent the forces arrayed against him. I submit that, save in extremely rare cases, Royalty alone can give that complete assurance of protection which is necessary. Such, I believe, was the opinion of the Duke of Wellington.

We have noticed certain instances of an element of uncertainty being introduced into an officer's career. This feature of uncertainty is most pronounced at the present time, and is largely promoted by Army policy and the Army system. There is no continuity in Army policy; one year the establishment is increased, another year it is decreased; the changes produce anxieties and induce a general sense of uncertainty. The Army system is not a new growth, but some of its characteristics have been more prominent in present years than for some time past. The British officer is expected to fill efficiently any post to which he is appointed, whether he possesses any previous experience in the duties he is called on to perform or not. Please do not misunderstand me—disabuse your mind of the personal element—rivet your attention wholly on the system. Our Army system virtually abhors the specialist and the expert—such is the logical inference to be drawn from an article by a well-known authority who has filled a very highly placed post on the General Staff. I refer to Colonel Callwell's article on the General Staff in the January number of the *National Defence Magazine*, where he states that specialists and experts are not wanted on the General Staff. As an instance, I quote the case of those officers who, having devoted themselves entirely to the study of Coast Defence Warfare, not infrequently find in the General Staff officer appointed to instruct and prepare them for war, an officer who may never have served in a coast fortress before. Our system aims at securing an able officer and employing him under widely varying conditions and circumstances rather than restricting his employment to that particular sphere in which he displays marked ability, and there developing his talents to the full in the public service.

What would have been the result had Prussia adopted such a system? Can we seriously contemplate the adoption by Prussia of a system the result of which might have seen that Power opening the war of 1870 with Moltke and Von Roon commanding the 1st and 2nd Armies, Prince Frederick Charles controlling the Administration, and Steinmetz Chief of the General Staff? Yet some changes of this nature must inevitably

have been imposed by our Army system. The converse is equally pertinent. In the British Service, Moltke could never have created for you a General Staff; neither would Von Roon ever have been able to make the British Army the wonderful machine for war which he did the Prussian Army, even if political conditions had been favourable.

This system may have advantages, but amongst its disadvantages is that one which produces general uncertainty in an officer's prospects. Let an officer work as hard as he can; let him qualify himself in every way possible; let him win the approbation of those under whom he serves; nay, let him win much distinction: he never knows when his prospects may not be blighted, not because he is not recognised as deserving, but because someone drops, as it were, from the clouds and has to be provided for. There is also another great disadvantage: the officer does not understand the *raison d'être* of the system, and those who are unaffected as well as those affected view the situation with apprehension.

In our study of this subject we can find no sign of any diminution of martial ardour in the educated youth of the nation; but we do find a state of affairs subsisting which dissuades it from entering the British service. While within the Army we find conditions which tend to produce a somewhat widespread disappointment of the reasonable expectations of those who have embraced the noblest of all professions.

TABLE OF REGIMENTAL PAY AND PENSION SCALE.

From the Article by "Reserve" in the "National Defence Magazine," July, 1909.

—	Pay.						Lodging Allowance (if granted).	Pension.		
	Cavalry (except Household Cavalry).	Field Artillery (except Royal Horse Artillery).	Garrison Artillery, including Armament Pay.	Engineers, including Engineer Pay.	Infantry (except Guards).	Army Service Corps (including Corps Pay).		After Years Service.	Rate.	Probable Age.
Lieut.-Colonel,	£	£	£	£	£	£	£	Final.	£	
including	502	474	502	639	474	493	73	30	420 &	52
Command								27	450	
Pay.									365	50
									300	47
Major { over 2 years	310	292	356	456	310	389	55	At 48 years of age		
Major { under	274				248	345		£300 compulsorily.		
								25	200	45
Captain ...	237	211	266	321	211	284	41	15	120	35
Lieutenant ...	140	125	161	198	119	183	36	—	—	—
2nd Lieutenant	122	102	138	175	96	141	36	—	—	—

STATISTICS OF EXAMINATIONS FOR ADMISSION TO WOOLWICH AND SANDHURST.

Compiled from Reports of Civil Service Commissioners and Official Publications, giving Results of Examinations.

OLD SYSTEM.

Year.	Sandhurst, Preliminary. Number Candidates.	Sandhurst, Preliminary. Number Passed.	Sandhurst, Competitive. Number Candidates.	Sandhurst, Competitive. Number Cadetships.	Woolwich. Number Candidates.	Woolwich. Number Qualified.	Woolwich. Number Cadetships.	Remarks.
1890	3,590	1,237	1,106	294	504	268	120	
1891	4,202	945	1,091	268	406	195	110	
1892	2,662	848	1,383	258	Incomplete.			
1893	1,647	598	967	204	448	249	100	
1894	—	—	979	202	472	292	95	Preliminary abolished and examination fee increased to keep away those who have no chance.
1895	—	—	964	202	387	232	80	
1896	—	—	959	202	389	232	80	
1897	—	—	890	202	377	221	132	
1898	—	—	848	298	347	256	168	
1899	—	—	798	261	352	272	195	
1900	—	—	750	320	459	297	230	
1901	—	—	711	320	524	409	145	
1902	—	—	811	320	487	415	120	Age limit raised.
1903	—	—	913	230	412	366	70	
1904	—	—	1,014	170	458	401	100	
1905	—	—	956	300	526	—	110	

NEW SYSTEM.

Year.	Qualifying. § Number of Candidates taking whole Examination.	Qualifying. Number Passed.	Competitive. Woolwich. Candidates.	Competitive. Woolwich. Cadetships.	Competitive. Sandhurst. Candidates.	Competitive. Sandhurst. Cadetships.	†Actual Total Number of Candidates.	Remarks.
1906	529	226	177	36	227	200	319	† Some candidates compete in both examinations, and are there shown twice over in columns 4 and 6.
	382 (911)	220 (446)	118	36	152	130	224	
1907	540	258	125	36	195	75	273	
	353 (893)	168 (426)	125	36	234	71	308	
1908	429	205	142	36	298	217	377	* No competitive examination held.
	326 (755)	113 (318)	112	56	162	107	242	
1909	455	223	119	80	*	226	—	° Includes Math. I., Woolwich.
	°399 (854)	231 (°454)	*	80	*	161	—	

Note for yrs. 1894-99 inc. Av. ann. No. Candidates 1293. Av. No. Cadetships 352.
,, 1903-05 inc. ,, ,, 1426. ,, ,, 326.
,, 1906-09 inc. ,, ,, ‡(863). ,, ,, 394.

‡ This does not include Candidates with Leaving Certificates.
§ If total number of candidates presenting themselves be taken the average p.a. will be 926, but this figure would include many taking "leaving" certificates.

TABLE SHOWING HOW SOME OF THE MORE IMPORTANT PUBLIC SCHOOLS SUPPLY THE PUBLIC SERVICE.

School.	Sandhurst.					Woolwich.							Civil Service.				
	1905	1906	1907	1908	Total.	1905	1906	1907	1908	Total.	Direct.	Assisted.	1905	1906	1907	1908	Total.
Eton	26	28	30	37	121	1	11	3	1	16	8	8	1	3	3	3	10
Harrow	12	15	8	19	54	3	3	1	2	9	4	5	3	—	1	1	5
Winchester	8	8	6	9	31	6	2	1	2	11	4	7	2	4	1	3	10
Cheltenham	24	26	20	45	115	18	14	13	10	55	49	6	3	—	—	4	7
Clifton	10	13	12	7	42	3	8	9	8	28	20	8	2	3	3	4	12
Wellington	24	46	31	47	148	10	12	11	8	41	22	19	1	1	1	1	4
Charterhouse	7	13	9	15	44	4	4	4	2	14	6	8	2	4	3	4	13
Haileybury	7	10	9	14	40	5	1	2	—	8	5	3	1	—	—	2	3
Marlborough	9	11	9	13	42	4	5	5	3	17	6	11	2	2	—	—	4
Rugby	8	11	5	10	34	8	2	2	12	24	18	6	—	4	7	—	11
Uppingham	3	4	3	5	15	2	1	—	—	3	3	—	1	—	4	—	5
Westminster	1	2	—	2	5	1	—	1	—	2	—	2	1	1	3	1	6
Bedford	18	19	9	21	67	3	2	3	1	9	9	—	1	2	—	1	4
Dulwich	4	8	5	5	22	4	—	—	1	5	3	2	3	2	2	3	10
St. Paul's	3	8	4	2	17	—	2	1	—	3	2	1	3	4	4	3	14
Other Schools and Tutors ...	184	143	118	166	611	35	24	18	22	99	48	51	57	67	60	52	236
Totals	348	365	278	417	1408	107	91	74	72	344	207	137	83	97	92	82	354

Compiled from Annual Reports of Civil Service Commissioners and the Public Schools Year Book.

APPENDIX.

Army Entrance Examinations.

Mr. R. H. Brade, War Office, to the Secretary, Civil Service Commission.

August 27, 1904.

Sir,

I have the honour to inform you that the Army Council still hope that the Civil Service Commissioners may consent to carry out examinations for "Qualifying" certificates under the new scheme for Army Candidates, which comes into force next year. Since the Commissioners stated in their letter of the 3rd October, 1903,[1] that they were not prepared to carry out these examinations, several changes have taken place.

It has been decided that "Leaving" certificates and "Qualifying" certificates shall be entirely separate; and that while examinations for the former shall be carried out at schools and in connection with inspection of schools, by bodies directly connected with education, examinations for the latter shall be carried out by a single central body.

. . . . .

The examination for "Qualifying" certificates may be considered to form part of the Entrance Examination for the Royal Military College and Royal Military Academy, and need not require the same standard as that for "Leaving" certificates.

It has been decided to allow candidates who hold "Leaving" certificates to be exempt from this portion of any Entrance Examination, as they will have passed a higher test. All other candidates to be eligible to attend a Competitive Examination must obtain "Qualifying" certificates at the examination for such certificates immediately preceding that Competitive Examination.

In the case of Militia and Imperial Yeomanry candidates, a "Qualifying" certificate once obtained would admit a candidate to any Military Competitive Examination which his age may allow him to attend.

The Army Council propose to announce that the examinations for "Qualifying" certificates will be held in March and September in each year. This would allow of the results being announced before the Competitive Examinations for the Royal Military Academy and Royal Military College take place, and would be a convenient arrangement in other respects. A candidate who failed in a Competitive Examination would be aware of the fact in time to present himself at the next examination for "Qualifying" certificates.

. . . . .

In the altered circumstances as narrated above the Army Council trust that the Civil Service Commissioners will undertake the conduct of the "Qualifying" examinations, and feel sure

[1] Not printed here.

that the announcement that they will do so will cause universal satisfaction.

I am, &c.

The Secretary, Civil Service Commission, to the Secretary, War Office.

September, 26, 1904.

SIR,

With reference to Mr. Brade's letter of the 27th ultimo, I am directed by the Civil Service Commissioners to assure you, for the information of the Army Council, of their desire to co-operate so far as possible with your Department in all matters which fall within their province, but at the same time to express their regret that it is impossible for them to accede to the request that they should undertake the conduct of the examinations for "Qualifying" certificates.

In this connection I am to call your attention to Mr. Howlett's letter of 3rd October, 1903,[1] and to point out that in the first and second paragraphs of that letter the view of the Commissioners is expressed that their functions as advisers to the War Office with regard to educational tests and examinations under the Order in Council of 26th February, 1897, are now restricted to the scope of the competitive examination and to questions directly connected therewith. Moreover, I am to refer you to Section II. in the same letter, which gives the reasons of the Commissioners for holding that the conduct of such a "Qualifying" examination should be entrusted to an educational body. The Commissioners adhere to the opinions then expressed, and they do not see that any new circumstances have arisen to induce them to change them. I am also to remind you that the Commissioners were informed by a letter from your Department dated 12th January, 1904,[2] that the Advisory Board on Military Education themselves accepted the responsibility of arranging for carrying out the "Qualifying" examinations, and that Mr. Arnold-Forster had approved of this recommendation.

. . . . . .

With reference to the suggestion that the same standard need not be required for "Qualifying" certificates as for "Leaving" certificates, the Commissioners still adhere to the recommendation conveyed in the letter from this Department of 3rd October, 1903,[1] that the same "Qualifying" examination should be required of all candidates. The effect of adopting two different standards of examination, of which the "Qualifying" standard should be the lower, would, in the opinion of the Commissioners, be to encourage the weakest candidates to leave the schools and have recourse to private tutors to be prepared for the lower examination, and that, in general, the weaker and

[1] Not printed here.

[2] Printed in the Appendix to the 48th Report of the Civil Service Commissioners.

idler boys would gravitate to the lower examination, and thus defeat the object which the Army Council no doubt have in view.

The Commissioners agree with the Army Council in holding that if a "Qualifying" examination were held independently by all bodies mentioned in paragraph 5 of the paper headed "Commissions in the Army,"[1] inconveniences, and in particular, differences of standard, would probably arise; but they see no reason why, if the examiners' fees are paid, the Oxford and Cambridge Schools Examination Board for England, the Scottish Education Department for Scotland, and some similar body for Ireland, should not examine candidates for the "Qualifying" certificate at the same time and on the same papers as candidates for the "Leaving" certificates. The Civil Service Commissioners in holding their own Army Competitive Examinations at local centres make it a stipulation that candidates from outside who wish to be examined shall be admitted to the schools for that purpose. If, however, the Army Council meet with initial difficulties in negotiating with the various educational bodies, the Commissioners would suggest that the existing system of examination which appears from the results to be very successful in securing the objects for which it was designed, should be continued for another year.

I have, &c.

Lieut.-General H. D. HUTCHINSON, C.S.I. :—I am sure we are all agreed that Major Churchill has given us a most excellent lecture on a most important subject. It is an essential condition of a good lecture that it should be not merely interesting, but also full of food for profitable reflection. That condition is, I think, amply fulfilled by Major Churchill's discourse. He has given us plenty to think about. I am therefore glad to see a very large attendance here this afternoon. It is significant of the great interest taken in the subject of the lecture; and as I observe many present who are well qualified to give us sound views and useful suggestions on the points which have been raised, I hope we shall have a very interesting and profitable discussion.

I should like to say, before I speak on the subject before us, that I feel sure that everyone here understands that neither is this lecture, nor any lecture delivered under the aegis of the Royal United Service Institution, given with any idea of indulging in carping criticism or captious fault finding. The sole object with which the Council (of which, at present, I have the honour to be the Chairman) organises these lectures and discussions is to help, to encourage, and, if possible, to instruct; to throw light on knotty questions and tangled problems, and so to assist in solving and unravelling them. And it is in that spirit, I hope, that all who are so good as to take part in the discussion this afternoon will approach the subject. And now, Sir, to the point. The salient fact which we have before us—a momentous fact which cannot be evaded, and must be met—is that the Army as a profession is not popular at the present time. Opinion on this point cannot be divided, for it is quite certain that the candidates required to fill the vacancies in the commissioned ranks are not forthcoming in anything like sufficient numbers; and further, that the supply,

[1] Not printed here.

such as it is, is decreasing, and has been steadily decreasing for some years past. There are many in this room, who, like myself, can remember the years of plenty, when there used to be an average of eight or ten candidates for every vacancy at Sandhurst or Woolwich. Now the vacancies are more numerous than the candidates, and, even for the Artillery and Engineers, candidates are now about to be admitted to the Royal Military Academy—for the first time, I believe, in its history—without undergoing the usual Competitive Entrance Examination. What can be the reason of this unfortunate condition of things? The lecturer has dwelt for some length on the Education question—the difficulty and uncertainty attending the Qualifying Examinations, and so on. That may have something to say to it. I will refer to this matter presently. But in my judgment the deterrent effects of examinations are insignificant compared with what I would call the two prime causes which in these days make parents and guardians and candidates look askance at the Army as a profession. These are, first, the inadequate rates of pay of subalterns and captains: and, second, the uncertain prospect of an officer's career in the British Service. On these three points, examinations, pay, and prospects, I should like to say a few words if you will have patience with me.

May I preface my remarks by saying that I believe we shall best appreciate the difficulties of the problem before us if we try to bear in mind that it is the regimental officer who is chiefly affected by them. It is the regimental officer who is the backbone and substance of the Army. If it is admitted that the Army as a profession does not at the present time attract candidates, and that reforms are necessary, then I submit it is from the point of view of the regimental officer that reforms should be considered. He is certainly the most important unit of the commissioned grades in the Army. One could conceivably get on without, say, a Brigade-Major, but you could not get on without the regimental officer; and if substantial improvements (which I believe he thoroughly deserves) could be effected in his position and prospects, I am sure the Army as a profession would soon recover its popularity, and we should hear no more about a shortage of officers.

And now I would say a word about the Army Entrance Examinations, which, as at present conducted, are apparently considered, in some quarters, to be unduly difficult, and to have the effect of discouraging and frightening away candidates. The lecturer has gone into this matter in some detail, and has taken me rather out of my depth. I think in describing how the present system has come about and is worked, and in his allotment of responsibility to various bodies, he is in error in one or two points, but these are of minor importance. What is really of consequence is the results, and although I myself was in office when the present system was introduced, I must admit they cannot be described yet as wholly satisfactory. But I do not believe that anyone really thinks that the standard of education fixed for Army candidates by the Leaving and Qualifying Certificates is a too-high standard. Judging, however, by results, and by reports that one hears, I think there must be room for some improvement in the way in which the Examinations are carried out. I have had some considerable experience in carrying out and controlling examinations, and I can testify that it is a very difficult thing to find a good examiner. An examiner can easily keep within the four corners of a syllabus, and yet set a very unsatisfactory paper. I am sure all those officers who have been associated with me in my work will endorse that statement. There is no lack, I need hardly say, of extremely able and clever men, but it is notorious that the cleverest men do not by

any means make the best examiners. I know that in the War Office, although we exercised a very close and vigilant control over examiners' work, we did not always succeed in satisfying examinees, or in avoiding occasional sharp criticism. But still the careful scrutiny and supervision of the papers set had on the whole the best effect, and I suggest that it is in this direction that some improvement might be made in the conduct of the Army Qualifying and Leaving Examinations, and thereby greater confidence in them created.

I pass to the question of the pay of officers. This is purely a matter for the Treasury, for I do not believe there is anyone connected with the Army in any capacity, from the highest to the lowest grade, who honestly believes that captains and subalterns receive an adequate remuneration for their services. Therefore, if the Treasury could be persuaded to make the necessary grant, it would certainly have the approval and the blessing of all concerned. It must be remembered that the class which chiefly sends its sons into the Army is not, and has never been, a rich class; and in these days of high rates, heavy taxes, and increased cost of living, the pinch of a small and inelastic income is more felt than ever. Therefore, it is a hard matter for parents to give a boy a long and expensive education, and afterwards, when he has got his commission, to make him an allowance for an uncertain period, until he can manage on his pay alone. It must also be borne in mind that in these days the regimental officer works very hard, and I will say, very cheerfully, for the small pay that he gets. There is still a good deal of ignorance and misapprehension abroad as to the duties and occupations of British officers, but those who know, know that his work is strenuous and continuous, and that whether he likes it or not he has to "scorn delights and live laborious days." No servant of the State earns his pay better than he does, and I am convinced that it is full time that the State recognised his worth and remunerated him accordingly. I would point out that the disadvantageous position of the British regimental officer is emphasised and accentuated by any comparison with that of his brother officer serving in the Indian Army. In that fine service which offers so many good openings to the keen soldier, the regimental officer receives pay on which he can live comfortably from the day on which he joins; his promotion, step by step, is assured, and does not depend upon accidents, as does that of the officer in the British Service under the regimental system; and in due fulness of time he knows he will get a good pension—provided always that the Bengali Baboo does not turn us out of India! What is the consequence, the very natural consequence? It is that there is never any shortage of candidates for the Indian Army. They get the pick of every batch that comes out of Sandhurst; and there is probably not a British regiment in the Service which does not contain youngsters at this moment who are chafing to join the Indian Army, because of the independence which they will gain by doing so. I do believe this question of sufficient pay—or perhaps I should say, insufficient pay—to be the bedrock of this problem of the supply of officers, and I am convinced that if the case of regimental officers of British regiments were to be taken up by the Government, as Lord Kitchener and the Viceroy, and the Secretary of State for India, lately took up the case of officers of the Indian Army, their action would be not only lauded as generous, but also would be universally acclaimed as just and wise.

In conclusion, one word as to the uncertainty of the prospects of officers. This is a matter in which legislation is very difficult, and it is not easy to suggest any remedy. But that the uncertainty exists is certain, and

also that it is a potent factor in creating dissatisfaction, and in sapping the sources of supply of officers to the Army. If this fact were fully recognised and appreciated at Headquarters, that by itself would be a step towards improvement. It is a very risky thing for an officer to let off a grumble, or to be known as a man with a grievance. Therefore, officers very wisely and properly, and I may say loyally, do not "talk"—with rare exceptions. Still, it is undeniable that there is a great deal of uncertainty during an officer's career as to his position and prospects: and this uncertainty has a bad effect, which is enhanced by the blows and disappointments which sometimes fall, because these are often felt to be undeserved. I may mention one instance of the kind of thing that happens. Until quite recently an officer had to go at the age of forty-eight, unless he had by that time reached the rank of Lieutenant-Colonel. The other day this age limit was altered to fifty. That saved and pleased a few officers, but it disappointed many more than it pleased, and it unexpectedly retarded for two years the promotion of a great many. I do not criticise the new order; I only remark on its effect, as creating uncertainty and disappointment, and in some cases unmerited hardship.

I could say a great deal more, but I have already exceeded my time and trespassed on the limits of your patience. I will only add that in spite of all drawbacks and disabilities there can be no doubt that the Army as a profession is still the finest opening in the world for anyone. I thank you for your attentive hearing.

Major E. C. HAWKSHAW, R.A. (retired):—I feel extremely diffident in rising to speak in the presence of so many distinguished officers senior to myself, and only do so because I think some good may accrue. Why is it that the Army is unpopular as a profession now? It is an unpleasant fact to contemplate, but there it is! The profession of arms, until recent years the noblest aspiration that youth could have, and once so popular, is now shunned. In my mind the reason is simple, viz., the present system of Confidential Reports. I grant you must have them in some form, but, in all honour and fairness, not as they are now. May I here mention the fact that the great General Gordon was once reported by a superior as unlikely ever to make an efficient officer! Let me give another instance, which will scarcely be credited, and which will show better than any words how earnestly invoked by the speaker is the day when we shall once more have a Royal Duke at the head of the Army. When the late Duke of Cambridge was retiring from the post of Commander-in-Chief, and Lord Wolseley was taking his place, the great innovation of fire discipline was being rightly pushed hard in the practice camps of the Royal Artillery. I was serving in command of a battery in India at the time. Well, the orders for carrying out this practice were, I can only say, childish and ludicrous, and their adoption led to most of the grief in loss of guns, etc., which befel the R.A. in South Africa. An officer of my acquaintance wrote pointing this out, and advocating reforms. He incurred the wrath of the authorities, and was told to send in his papers. He appealed to the Duke, who ordered him back to duty! When the Duke went he was ordered again to send in his papers by the Commander-in-Chief, but stoutly refused to do so, asking for a Court Martial or Court of Inquiry, both of which were refused, and he then found himself gazetted out, no reason for the action taken against him being vouchsafed. He tried legal efforts at redress, and his solicitor was told by a high War Office authority that

there was no case against him at all (quite true). He appealed in every way allowed by the Queen's Regulations, and invariably came the answer back: "This case cannot be re-opened." Many reforms that he advocated have now been adopted, but his career has, of course, been blasted for ever. Any names required I can give. Now is such an abuse of justice as this likely to attract youngsters to join a profession where at any moment, for no fault, they may be ruined? In the R.A. I had the advantage of serving in the R.H.A., R.F.A., and R.G.A. under the old system, and have *no* words in which to advocate the present system of Confidential Reports, having witnessed their working in England, India, and the Colonies. The remedy that I would suggest is that any officer who thinks himself aggrieved should have the *right* to a court of inquiry, or a court martial, or, better still, an appeal to a civil court of law. We shall then have some protection which at present we have not; as I have shown, appealing exists in theory alone. I have seen during my service men whose high rank authorised them to be entrusted with the compilation of these reports, whose sole claim to distinction and position seems to have been that they were possessed of qualities which were the *last* that any officer should possess, and yet there were no means of challenging their decisions or of having these revised by some other impartial authority. I trust that what has been brought forward may impress my hearers that nobody knows, except those who have been in the Army and had experience of all that I have said, what a blot on our system these reports can be made. I am convinced that a prompt change—made public—would much help in the addition to the number of candidates for what *should* stand, and *did* in old days, as a privilege—the holding of a commission in the Army, to serve our King and country.

T. Miller Maguire, M.A., LL.D. (Barrister-at-Law, Inner Temple): —In response to your challenge, my Lord, I must let some of my ammunition off, however unpleasant it may be to a considerable portion of the audience; but I wish to support in the strongest possible manner the protest that has just been made by Major Hawkshaw against what I consider is a fatal disgrace to any profession, particularly the noble profession about which the gallant lecturer has been speaking. I entirely agree with every word the latter has said about the Profession of Arms. Not only has he quoted immortal lines on that subject, but anyone who has the least knowledge of English literature, or general literature, such as was expected from every officer of the Army before the entrance course was modified to suit the absurd caprices of the worst schoolmasters in the world, namely, those of the fashionable English public schools, could go on all night selecting examples from the prose works of Ruskin, from the poetic works of Chaucer and Spenser, about chivalry and arms, knighthood and love, and from the records of Napier and Alison, not to mention the long line of ancient and foreign historians, to show that the Profession of Arms at large is, as Jeremy Taylor said, a noble thing. In one of his sermons the great divine said: "I myself feel bound always to admire the courage of the soldier. Here is a poor, wretched person, badly clothed"—as he was then—"who for a miserable consideration will walk coolly to death at the command of a sergeant." If a man that will walk coolly to death at the command of a sergeant was then worthy of being commemorated in immortal language by one of the greatest of our Ecclesiastics, what about the man who preserves his brain-power in the midst of an inferno, and not only himself walks coolly to death, but leads others and helps others

marching in the same direction? Nothing finer can be contemplated by the human mind. There is nothing which has been immortalised more often in poetry, from the heroes of Troy to the heroes of the most modern times. Having been brought up myself, if I may say so, by a far-seeing, benevolent, and reverend father to admire soldiery, and having been connected with soldiery of all ranks all my life, I re-echo those elevating sentiments only too truly set forth by the lecturer. But the contrast between the sentiments of the lecturer and the facts that Major Hawkshaw has mentioned is abhorrent to any honourable man. If Jeremy Taylor's was the ideal view of the soldier, the ideal of the War Office is very different. Confidential reports! — dishonourable reports by any person in authority against a poor lieutenant or poor captain. I have been the victim for many years of seeing with horror these Reports in my capacity as a lawyer. Report after report, confidential disgrace after confidential disgrace, has been put before me, and, as Major Hawkshaw says, there was no redress. The only legal advice was "a soldier has no legal rights"—an officer of our military services is only a legal pariah. There was no use in any solicitor taking up a soldier's case for any fee, small or great; defeat in our courts at the instance of Crown lawyers was a certainty. What kind of a career is that? No redress for ruin by an infamous report by your superior! What is the law on the subject? I have quoted it again and again. You soldiers come down to the Temple with your case, and you think you can get redress. You will find that you can get none. The Grand Turk is nothing to the Grand—I beg your pardon, Sir, I was going to say—the Grand Secretary of State for War, but that is ammunition too strong! I hope I may say in reference to party politics that officers of both Services are going to have soon, in consequence of the events of the last twenty-four hours, a better time in the future. "A series of new times" will begin for them, let us hope. As I cannot allude to the Secretary of State for War perhaps I may give my own experience. I have been asked for, I should think, a thousand confidential reports. I used to get regularly about one hundred times a year the following question, signed by a person in authority at the War Office. The question which used to be asked in connection with the young candidates for the Army and Militia officers was: "Is his moral character"—at the age of seventeen—"absolutely unexceptional." These confidential reports used habitually to come to me in a big envelope marked "Confidential," and I used to send my report back in a bigger envelope marked "Non-confidential Report." Think of asking a man like me about a young officer of seventeen to twenty years of age whether his moral character is absolutely unexceptionable. Mine was not—I would be very sorry indeed to have had a character anything like that. I would have lost a great deal of information that I have acquired if I had pretended to be anything of the kind. Is his moral character absolutely unexceptionable? Perhaps so—I hope not, was my reply. "At any rate it is just as good as Hannibal's or Cæsar's, or Napoleon's, or Nelson's, or that of Cabinet Ministers, or it must be pretty bad." Now did you ever hear such rubbish as this to pass for common sense in a wise nation? Confidential reports!—I wish I could read out my briefs when engaged in the cases of Army officers, to this audience, and I would make each perpendicular hair, not on you, my Lord, because you are an old Parliamentary hand, but on all the ladies in this audience, to stand on end, "like quills upon a fretful porcupine." In order that it may prevent any further difficulty being raised about these confidential reports, I want to quote you the opinion set forth by the chief of the

official legal *condottieri*, to wit, the Attorney General. I do not think "*condottieri*" is a bad word to use. When I use the word *condottieri* I compliment official lawyers, because among the Italian *condottieri* were some of the ablest military brains in their age. The professional soldiery, German, Italian, Swiss, Scotch of the sixteenth and seventeenth centuries, who fought all over Europe, were among the most skilful soldiers in all history, and without skill and knowledge in war mere courage is a form of madness as Von Hoenig says.

Colonel STEWART:—What about the Irish Brigade?

Dr. MAGUIRE:—My modesty prevented any allusion to the Hibernians, the lecturer referred to English rather than British, but I had a notion that the Scotto-Hibernian Colonel Stewart on my right would make up for my deficiency. The services of the Irish Brigade are writ large in the annals of French renown. The *condottieri* of Italy and the exiled Scotch, and Irish and Huguenots were magnificent soldiers, but I am going to quote to you the opinion of a legal *condottiere*. Whom am I going to quote? His Majesty's Attorney General, Sir William Robson. Here is the legal position of the British officer. Are you content with it? Is there any certainty in it? Is this a profession? Is this a career? Are officers for ever to be victims of the shuffling tomfoolery of political partisans? At any rate this is what was stated by the Attorney General a short time ago to the Court of Appeal: "The commission is held entirely at the King's pleasure." Curious! Why is not a Judge's commission held entirely at the King's pleasure? Why? Is an Attorney General a more decent, a more useful and truthful person than a real General? He gets four times the pay; is he four times as good? Is he half as good? Is he not a legal *condottiere* mercenary paid for talking at the rate of twenty guineas a day all the year round, whether he talks or plays golf? He says that "an officer's commission is held entirely at the King's pleasure; His Majesty may dismiss with or without enquiry. He may select as the agents for the purpose of holding an enquiry any persons he likes," and "they may be called by the name of somebody else or by their own name." That is the Court of Appeal for officers! "They may for the purpose be legally or irregularly constituted!" In regard to officers there may be enquiry or no enquiry, but there can be no doubt as to the complete power of the King acting through any military authority "to dismiss without any particular cause shown, but merely at his pleasure." By this, in my opinion, highly disloyal phrase, the Attorney General means: "At the pleasure of His Majesty's Secretary of State for Foreign Affairs." This Grank Turk, this Sublime Porte, may be an Englishman, or an Irishman, or a Scotsman, or a K.C., with or without practice, or a man who has never even been a Volunteer or a philosophic humanitarian, but by any kind of metaphysical or forensic General your real General Officers may be dismissed at their caprice, at the mere *ipse dixit* of Power. You have no appeal. A Field-Marshal or a Colour-Sergeant can be ejected without an hour's notice, or cause shown, and there is neither appeal or redress. A great deal has been said about advisory boards and military councils. What on earth is the Educational Advisory Board. The Education Advisory Board consists, as it seems to me, and as Major Churchill says, of as curious and anomalous an assortment of ill-conditioned and ill-assorted atoms and accidents as the followers of Hudibras. The lecturer has proved that everybody and anybody can be an examiner or an Advisory Board potentate except a person who

knows his business. As for the War Office educational system, it is a deadly Upas, an all-blighting tree. I have had the terrible misfortune of being induced against the warnings of all my friends to waste twenty-five years of my life under the deadly Upas. I hate the Army Council with all my soul, and have never ceased to denounce it in an enormous variety of historical examples, and letters, and appeals, not one of which the Council read from the day it was founded till now. Its creation was the worst military mistake that any party ever made in England, and I sincerely hope, my Lord, that if in England, through a good Providence, the political parties change, and others come in, one of the first new phases of military policy may be to hark back to the common military sense of mankind and nominate a Commander-in-Chief. But I will not keep you longer on this subject, because I want to say something about examinations and public schools, and to give my own experience of the extraordinary thing called an examination. Gentlemen have called the Qualifying Test a hard examination. A hard examination! Why, there would not be a public school or secondary school boy in England of sound health and normal brain power, taught with any degree of efficiency, by clerical or lay teachers, in any kind of efficient class, that could not pass at the end of the two years, between fifteen and seventeen, twice as hard an examination. What about the German, or Japanese, or American Standard, the minimum standard for officers? I remember when the examinations were hard, when there was a proper Preliminary Examination, and seven to one *competed* for Sandhurst. I have had the misfortune of being connected with military education for something like twenty-five years. I was warned not to touch it with a pair of tongs, but I did, and the tongs have not protected me or my poor colleagues from War Office fires, and we have been burnt most effectively. It has been my fate to look into the intermediate education of other countries, and to deal with the secondary education of poor Irish lads, with not a fraction of the advantages of Eton and Harrow lads, and there is not a single small shopkeeper's son or daughter of sixteen either in Belfast or Galway, Cork or Dublin, of average intelligence that could not pass with the greatest ease the qualifying examination. Why? Because their tutors and schoolmasters are compelled by their fathers to look after the brains of their pupils betimes, and games are not put before learning. Knowledge is worshipped by poor Irish, Scotch, and Japanese; English clerical fashionable schoolmasters "kill the very germs of intelligence." When the richer English are true to their children's real interests, and compel schoolmasters to "mend or end," there will be no more complaints of the severity of childish educational programmes. I am sure the lecturer agrees with me. One word more on the Army Council question and the Army Board question. Even supposing you are able to prove that the Boards of the Navy are perfect, I have read that there was a Navy Board under Lord Melville, of whom you have heard, Sir, in connection with Parliamentary impeachments, and that it did not know the meaning of sea water—that was years ago, in the year 1813—and Wellington said: "Here is a Naval Board that absolutely does not know the first conditions of the element of which they have got charge." Naval Boards have failed in many instances. I have heard criticisms about curious Naval Boards in the last two or three years. But General Grant as well as Napoleon—one of the greatest of all militarists, possessing one of the soundest military heads that ever organised—and every other officer of ability all denounced the Army Councils system which has been foisted with reckless haste and ruinous consequences on

our unfortunate officers. One of the most recent exponents of military literature and science is no less a person than the French General Langlois. I would not dare, being a mere civilian and a mere kind of mongrel of a lecturing lawyer and a volunteer, to put up my opinion on this matter as against the chiefs of the military world, but take what General Langlois says. General Hutchinson will admit that I could not make a better quotation in regard to the theory of war in the last few years than from General Langlois, and he says: "A Grand Council or Advisory Board (educational or other) is only fit for deception." Gentlemen of the Army and civilian taxpayers, if you like that deception stick to it. You pay your money and take your choice. "The psychology of Boards and Councils is curious"—that of our Council is very curious indeed. "These are after all irresponsible assemblies." I noticed that in the House of Lords, when one case was being discussed, Lord Methuen said he was on the Board of Selection for the Army, but was absent in that instance, and the Duke of Connaught was somewhere else, also on the Board, but nobody is there when you want him. It would not pay to fix responsibility; it is an anonymous Board, whereas the Commander-in-Chief is tangible. "These are, after all, anonymous irresponsible assemblies, and pusillanimous to a degree," says General Langlois. I heard the late Mr. Arnold Forster say in the last speech he made in this Hall that the very same Army Council folk had agreed to every single proposal of the Government, however different, contradictory, or absurd. "They venture on nothing new. There are always reactionaries among them, and there are mere cavillers and sceptics who are even more dangerous than the progresseries at any cost." The votes of such a body are quite worthless. "Its solutions are hesitating, and only tend to a *statu quo.*" There is nothing manly, nothing original about its decisions. May I, Sir, as a civilian knowing, or at least believing, in common with all the wisest authors and students of international affairs, that great dangers are in store for our race and pressing on us quickly—social changes, European changes, naval changes, and changes in the Pacific, which is about to become the new centre of the strategy of mankind—may I impress upon you the words of one of the freshest of all new politicians, the great Japanese publicist, author of the "Risen Sun," Baron Suyematsu. He has written on the subject of Bushido, which the lecturer translates into chivalry. Here is a summary of Bushido, Bushis became Daimios by their personal valour and the honour they had attained or won. The successive stages of the military class always handed down the same sort of sentiments and notions as their predecessors. They were men with healthy notions of manliness. Wisdom and learning they revered. Truth and self-sacrifice they worshipped. "Bushido" then is no other than the ideal code of military honour and discipline. Bushi were exactly like Spenser's knights, "right, faithful, true, they were in deed and word," and like Chaucer's knight, "gladly wolde they lerne and gladly teche." Like "St. George of Merrie Englande the signe of victorie" they were loved and honoured by the faire, "and by his side a lovely ladye rode, upon a lowly steede as white as snow, herself much whiter." Here you have chivalry, horsemanship, the knight, the hero, not in confidential anonymous reports, not in "miching Mallech" or sneaking mischief, not in paltry spectacles by hired mercenaries of the foot. Not in dishonoured though costly parodies of equity by partisan lawyers. The modern British officer should be Bushido incarnate, and he would be the very ideal soldier if allowed by the kaleidoscopic machinery of a Council, which as Langlois says, *tergiversera toujours,*

or if not bound by the very cheap but all-embracing tape of extemporising boards whose only valour is the torpor of ignorant inefficiency. The potentialities of your race must necessarily be entrusted to the officers of your Navy and of your Army. All our hopes and all the hopes of our children are bound up in their careers. You cannot treat them too well, you cannot give them too much, you cannot educate them too splendidly. Everything that is lofty in human nature should be concentrated in their brains and in their bodies—everything that is fine in art should be lavished on their perfect manhood. That ought to be our ideal. I beg of this audience, and of every other audience, and of you, my Lord, hoping that you and your friends may have time to soon realise these aspirations, to see to it that these officers of the Army are not presented to public pity in another year or so in the disparaged and miserable condition that they are in now as to pay and other conditions of comfort and repute—inferior in numbers, with a farcical education, but that they are treated at least as generously as attorney generals or solicitor generals, or any other agents of either chicanery or honour, that they are treated in a manner worthy of the traditions of an Imperial Race. To neglect or disparage, to cheat or to humiliate our officers, or our privates, for that matter, and thus produce a shortage, and to degrade the Profession of Arms, is to stab the future of our Empire in the heart.

Colonel W. T. Dooner (late Royal Inniskilling Fusiliers):—I sincerely wish that I had had the good fortune to have been called on to speak before Dr. Miller Maguire, as I fear that after his eloquent speech I can hardly hope to keep your attention even for a few moments. I rise to call attention to one point in connection with the deficiency of candidates for Woolwich and Sandhurst that the lecturer has not touched upon in his paper, and which none of the speakers have referred to. It is a point that I think has had the greatest effect in diminishing the number of candidates for both Woolwich and Sandhurst—I allude to the change in the age for admission which was made some years ago. Up to a few years since any boy at a public school could go up for Woolwich after his sixteenth birthday, and to Sandhurst after his seventeenth birthday. Then a great and, in my opinion, a very unwise change was made. I believe it was made so as to encourage University candidates to join the Army, but whatever the reason was, I am as convinced as I possibly can be that it has had more to do with reducing the number of candidates for Woolwich and Sandhurst than almost all the points the other speakers have referred to, such as confidential reports, small pay, and everything else. It works in this way. A boy now cannot go up for Woolwich or Sandhurst until he is eighteen years of age. His parents, therefore, are compelled to keep him at a public school much longer than formerly at much expense—£150 to £200 a year—because all parents, I think, endeavour to send their sons to public schools, and the lecturer has pointed out how anxious the War Office has been to get public school boys to compete for the Army. The result of this is that these boys are kept up to eighteen years of age, and then if they are a bit lucky about the month of their birth—this is a very important point—if they have, fortunately for them and their parents, been born shortly before the 1st of June or before the 1st of December, they can then go in for the half-yearly examination that usually takes place in these months. But if they have been born in June or December they cannot go in for another six months. It so happens, therefore, that many candidates cannot compete until they are eighteen and a quarter or nearly eighteen and a half

years of age; and if successful at their first trial they have then to study at Woolwich or Sandhurst for two years more, so that a boy, no matter how clever he may be, cannot get his commission in the Army under present rules until close on his twenty-first birthday. If successful at his second or third trial he is, of course, proportionately older. I venture to think that at 21 or 22 years of age is a great deal too old to join the Army. In connection with this point I thought I would look up just now in the Army List the ages at which all our Field-Marshals entered the Service. Lord Wolseley joined when he was eighteen years and nine months old; H.R.H. the Duke of Connaught joined when he was eighteen years and one month old; Field-Marshal Lord Roberts was a little older, nineteen years and two months; Sir Evelyn Wood was seventeen years and seven months; Sir George White eighteen years and four months; Lord Grenfell, eighteen years and three months; Sir Charles Brownlow was only sixteen years of age; and Lord Kitchener seems to have been the oldest of them all, for he joined when he was over twenty. If these unwise age rules that have been recently brought into force to prevent boys and youths going into the Army had existed when all those Field-Marshals joined, I wonder how many of their parents would have kept them on waiting at public schools or whether they would have risked possible failure and perhaps induced their sons to choose some other profession. I say we are losing many valuable boys from the public schools as candidates for the Army by this rule with regard to eighteen years of age, and the War Office have at length apparently recognised it, as I saw an announcement in the papers yesterday that from June next the age is to be reduced to seventeen and a half; so that the authorities have only gone halfway. I should like to suggest that they should reduce it to seventeen, or even to sixteen and a half years. There is no valid reason which I know of why, if a clever boy is able to pass the test, he should not go in at sixteen and a half years and enter the Army at or after eighteen years of age in the same way as most of the Field-Marshals whose cases I have given. It costs really about £400 to keep a boy at a public school for two extra years till he is eighteen years old, and supposing he fails the first time, where is he then? He can go up for three times; he may fail twice, and then comes the third and worst trial of all. Most of us are aware that the public schools do not care about keeping boys after they are nineteen, or a little older, so that the boy has to leave and throw himself at the feet of some kind teacher like Dr. Miller Maguire, or somebody else, to try and help him for his last chance, and should he fail his plight is a most unhappy one, as he has not received a suitable education for any other profession. I know, and you, my Lord, are also aware, that in connection with this age question there are some difficulties, but none of them unsurmountable. The Indian Government, for instance, object to take lieutenants because they get a little better pay—about 50 rupees a month—where the establishment should be second lieutenants, and thus the War Office are in a little difficulty naturally, because they do not like to send young officers out to India before they are twenty years of age, *following the same rule that applies to the men.* But I think that could be very easily got over. If difficulties of that kind arise with regard to India, I think it would be very simple and easy to keep the second lieutenants with the Home battalion until they reach the necessary age, just like we keep the men. We have the same difficulty with the drafts, and I think we could keep the young officers at home just as we do

the men. I suggest that the age should be reduced to at least seventeen, and that the War Office by this time next year should allow all boys, if so desirous, to compete for Woolwich and Sandhurst immediately after their seventeenth birthday. I know two boys at the present moment, one at one public school, and one at another. They are both seventeen years of age, and they have had the misfortune and annoyance during the last examination and the examination before of seeing boys, their seniors in age, in the forms below them going into Woolwich or Sandhurst while they themselves have had to mark time, and are marking time at this moment because they are not eighteen years of age. Is not this absurd, in view of the ages at which the Field-Marshals of the British Army entered it, which I have given you? If this rule had applied to them they would have been marking time at the public schools when most of them had already joined the Army. I now pass to another point, examinations, with which I have had much to do, and I certainly think that the examinations for promotion might be a little less severe for those who only aspire to regimental work. I know we all say, how is it officers cannot pass these baby examinations? I remember the case of an officer that I did my best to get through. He was a captain. The qualifying marks were 1,200. That officer worked as hard as any man could work, but unfortunately he only made 1,183; he failed by 17. I remember that I was out in Phœnix Park one afternoon when I saw this very officer dressed up in marching order, with three or four men of his company, training and exercising to try and win the marching order race in the garrison sports. In my opinion that was not an officer —he was a good regimental officer—to turn out of the Army simply because he was a little mixed about magnetic variation, or could not solve some conundrum about Contours or Military Law. But out he had to go on £200 a year. One of the speakers has referred to the question of confidential reports. For myself I do not see how they are to be done away with. I think a commanding officer has no more important duty, and one which he does more conscientiously, than the making of those confidential reports.

Major HAWKSHAW :—Not always.

Colonel DOONER :—I think he always does them conscientiously. If the regulations are carried out—and every commanding officer, I presume, does carry them out—if he is driven to say a word against an officer, he has to call him in and say: "My dear fellow, I have tried to see an improvement and I cannot, and I have to so inform you." I had to say to one officer: "I am asked whether you are a good horseman, and I have never seen you on a horse in my life. How do you suppose I am going to answer that?" He decided to go to the Riding School, and after the usual course he turned out a very fair horseman. My ten minutes have expired and, therefore, there is no time to refer to the question of pay, but I do hope, Sir, that if we ever see you at the War Office again you will try and raise the pay of the subalterns, at any rate in India. It does seem ridiculous that the subalterns of the British Army have to be soldiering on lesser rates of pay beside the subalterns of the Indian Army, where, as General Hutchinson has told us, they have not the slightest difficulty in getting candidates. The British subaltern does not get the same rate of pay, and naturally the grievance is very great. I had intended to say something about the dates fixed for the qualifying examinations, and other things.

but I will only in conclusion add that I consider the question of the age at entry into Woolwich and Sandhurst is the most important point of all, and that it certainly should be reduced to seventeen or less.

Colonel H. H. A. STEWART (late Donegal Artillery):—I quite agree with what Colonel Dooner has just said about the age at which candidates should enter Woolwich and Sandhurst. There is not the slightest doubt that seventeen ought to be the age, if not sixteen. A great deal has been said about the pay, especially of the junior ranks, of the subalterns of the Army. We apparently have lost our initiative in everything, even in raising the pay of the officers of the Army. This initiative has been taken quite recently by our gallant allies the Japanese, who are at once going to raise the pay of the officers throughout their army by 30 per cent. The reason, in my humble opinion—and I have served for many years in the Regular Army and Militia—of the shortage is, as I think General Hutchinson said, the insufficient pay. A very trite saying was quoted by the lecturer of the German General Von der Goltz, namely, that the officer of the army should have such emoluments as to render him free from care. I can honestly say that as a subaltern for ten or twelve years in my regiment the greatest care that I had—and many others in the regiment, too—was how we were going to pay our mess bills every month. The lecturer mentioned that he considered—and I think very rightly—that the allowance to an officer in the infantry ought to be about £100 a year. I daresay the Chairman will remember the fact that, I think it was, Lord Esher's commission,[1] which sat about seven years ago, stated in their report than £60 a year ought to be sufficient for a subaltern in an infantry regiment, and for a subaltern in a cavalry regiment £200 a year—in an ordinary cavalry regiment—not the fancy ones. But I am of the opinion that £60 a year for the infantry branch of the Service, in which I served, is not sufficient, and especially so in India. My son, who is in an infantry regiment, returned home on leave a few months ago from India, and he says he found it more difficult to live there on his allowance than he did when he was at Aldershot. I think I may say it is the feeling of the meeting that an impartial enquiry into the cause of the shortage of officers is imperatively required, and the sooner it is begun the better.

The CHAIRMAN (Viscount Midleton):—I have the honour of saying a few words in closing one of the most interesting discussions at which I have been privileged to attend. I have not before had the pleasure of presiding at one of these meetings, but I can say honestly that during the somewhat long period that I was engaged in different capacities at the War Office I received the greatest possible advantage by reading from time to time the discussions which occurred here which bore upon my work there. And I must say that I do not think any question which you have taken up here requires so much treatment as the one which our lecturer this afternoon has so well discussed. I ought perhaps to say at

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[1] My memory was here at fault somewhat; it was a Committee presided over by Lord Stanley (Financial Secretary to the War Office), to which I meant to refer; its Report, signed by all the members and dated 21st July, 1902, sets forth in paragraph 78: . . . . "Such disbursements could be covered by £60 a year as a minimum (and certainly within £100) in the case of an infantry subaltern officer." . . . . For a subaltern of cavalry the Committee recommended an allowance of about "double the above amounts."—H. H. A. S.

the outset that in all these things any man who has borne a position at the War Office, whether it be military or civil, must take some small share of responsibility, although of course the larger share will always rest with the Secretary of State. I thought I came very well out of Dr. Miller Maguire's remarks this afternoon. His view of the Secretary of State is similar to that of the great Lord Wellesley, who, when he was once asked what he thought about Dr. Johnson's verses, after impressing on his questioner the necessity of secrecy as to his opinion, expressed the view that they were all bad, but some were possibly worse than others. I believe that Dr. Miller Maguire holds very much that view of Secretaries of State. I may further say that those wise men—if they were wise—who, after I left the War Office, exchanged the authority of the Secretary of State in many respects for that of the Army Council, and who thereby set up a buffer between the Secretary of State and the public, were justified in doing so, because the speech which we heard from Dr. Miller Maguire certainly left very little superfluous skin upon the Army Council. I am quite sure that in all these matters we ought to look not merely at what the individual is able to do for this or that subject, but we ought if we can on such occasions as this to consider how much influence we can collectively bring to bear to forward any particular change or any particular development in Army policy. All these things are not made in a moment. Our present difficulty, if I may say so, is the natural outcome of the South African War. The South African War obliged us to commission a very large number of officers in a very short time. It brought to light certain defects in training, though certainly not anything in the character of our officers, which would justify, as Major Churchill admirably pointed out, the attacks which were indulged in at that period. But while further qualifications were asked for, I can say from personal experience that I found it almost impossible to bring home to others—and I must say that those who advised me on the military side also did not feel at that time the necessity of realising—that if you were going to make the Army a profession for officers in which a man would be as hard worked as in the civil profession, that his chances must be in some degree equivalent to those of the civil professions, and that you must adopt a higher system of payment; that you must make the attractions of the Service more what they are in the Indian Service, as General Hutchinson said. I have always felt that the attempt to screw up, if I may use the expression, the requirements of officers, and at the same time not to provide them with additional attractions, might result, as it has resulted, in a shortage of the number of candidates. I do not say that nothing was done to try and meet them. In the cavalry, particularly, an effort was made by giving officers the opportunity of taking Government horses on very moderate terms. I have heard of many cases where fathers were able to send their sons into the cavalry through that who could not afford to do it before, when there was so heavy an outfit to provide; and some other changes were made, in addition to which it was held by the military authorities that the too frequent changes of stations might be to some extent arrested, and alterations were made with regard to the mess, furniture, and so forth. But the main question remains unsatisfied. If I may be allowed for a few moments to say what strikes me most of what has passed this afternoon, it is I think, that the cost of creating a general staff for the Army, despite the desire of everybody that we should go out largely in the direction of the general staff, has had a very serious effect in some respects on the prospects of the regimental officer. Everybody knows that the regimental officer is

the backbone of the Army. I hope you will not think that I am trying to justify one régime at the War Office or to attack another; there is not a word of that in what I desire to say. I am thinking of the War Office as a whole. I am thinking of the military and Army policy as it ought to be, something which is to be consecutively developed towards a higher end. There is no doubt, however, that in the course of the last three or four years the estimates have been increased by over half a million of money. Anybody who has had anything to do with the military forces of this country must know that when you are increasing largely in one direction you generally find there is a movement to economise in another. I personally have always greatly regretted any reduction in the number of regimental officers, because I am quite certain that if a war breaks out again that would probably be our weakest point. The disturbance is, of course, very great. When you reduce a regiment you have to absorb the officers. I remember an occasion when it was simply a question of absorbing one or two quartermasters out of two battalions which had existed for a very short time, the Liverpool Regiment. We had the greatest difficulty in getting any regiment in the Army to stop their promotion in order to put them in. But there is another and a much more serious difficulty. Major Churchill spoke of the relations between the staff and the Army. In one passage he particularly referred to this difficulty where he said, "Our system aims at securing a staff officer and employing him under widely varying conditions and circumstances rather than restricting his employment to that particular sphere in which he displays marked ability." May I say one word on that, because I do think that if the idea is what I suppose it to be, that rather runs counter to the conceived idea of how you can best develop the usefulness of your staff. I think I am right in saying—there are critics who know more about foreign armies than I do at present—that in the German army no man who serves on the staff is allowed to remain there long without in his earlier years being sent back to a regiment. I myself had a long conversation with an officer not long ago who belongs to the German general staff, who told me that he had been sent back first to serve in an infantry regiment, afterwards for a year and a half or two years in a cavalry regiment, while he was afterwards attached to an artillery battery in order that he might know, see, and understand every department of the Service before he was finally fixed in the general staff. I cannot help thinking that there is a great advantage in that view. I do not think that the regimental officer should be entirely cut off from staff work, nor that the staff officer should be entirely cut off from regimental work. I think the division as between staff and regiment has sometimes led to a very great hiatus between the War Office and the Army itself. For that reason, although in later years no doubt it may be well after a period to fix an officer in the particular line which he is going to adopt, I would suggest to the lecturer that that should not apply to the earlier years of his service. Now, ladies and gentlemen, what do we come to as to the criticism of our present position? There is first the question of pay, and that I imagine, if the present shortage of candidates continues, must ultimately be taken up as a business question. You cannot ask a man to give up his time, and work as he is now supposed to work and must work if he himself and those under him are to be efficient, without, at the same time, making it, so to speak, worth his while, or at any rate worth his father's while, to send him into a profession which is paid so badly as at present the Army is. May I remind you that, even in the last ten years, the classes from which

we must take our Army officers have become themselves much more luxurious, and undoubtedly spend more than they did. You cannot expect to put, as it were, a "ring fence" round the officers of your Army, and I often wonder how in the sister Service they contrive to do it. Further, I hope we are about to reach a period when we may come to bedrock in the changes which have been going on in Army matters for the last twenty years. There has hardly been a moment during that period when the question of Army reform has not been put before the public. I confess that I personally should be only too glad if we could adopt some scheme on Army matters to shut up both Parliament and the War Office for a short time, and thus enable the Army to fight out its own salvation; at all events to give everybody a sense that their career, and the circumstances under which they enter it, will remain a fixed quantity, and give them a chance of going ahead. I will not enter into the questions with regard to the examinations, because they have been discussed so very admirably this afternoon, except I might perhaps mention that I was a little struck with the repartee which the Civil Service Commissioners made to the War Office. I looked inside the report to see whether I had been the cause of it, but as I found the letter was dated a year after I ceased to be responsible, I felt that I had in military parlance got out of range. In the same way with regard to these examinations, I do not think the present system has been very satisfactory, and one of the most valuable results of this discussion will be that it will bring before those in authority the place where the shoe pinches, and will probably enable them to adopt some system which will in future give us an actual entrance examination to Sandhurst and Woolwich, which has been suspended for the last year or two. And now I feel I must not keep you any longer. I believe that the officers of the Army to-day are in a valley between two mountains—the mountain of the past when less efficiency was asked for, when there was less organised attempt to get up to the highest level on the part of the officers whom we engaged, but when on the other hand we had a more attractive Service and a larger number of people who could not find an outlet for their energies, and who were glad to go into the Army. But to-day we have got far nearer to Continental armies in our idea of our requirements, and the sacrifices we must call upon our officers to make. We have not, on the other hand, come up, as I think, to the commercial standard which we must some day reach if we are to induce men of the highest patriotism to place themselves in the position which our officers have to fulfil. The suggestion was made that we should take it from those who are above in order to meet the necessities of those who are below. This is the only criticism I wish to make in the course of my remarks. I do wish the officers of the Army, especially those who serve at headquarters, would try and keep civilians straight by themselves carrying on a consecutive policy. I have seen with the deepest regret that the higher commands, for which, after the war, with very great difficulty we obtained from the Treasury a better standard of remuneration than they had before, especially the commands at Aldershot, in Ireland, and on Salisbury Plain, have been reduced. The Generals who felt it quite impossible to take up a command, and do all that was necessary, and who could not possibly make both ends meet, did receive after the war a sum which made it possible for them to live. Now when I take up the estimates in the Army List I find that in every case those figures have been subsequently clipped. Only the other day I came across an officer who told me that he found it quite impossible to make both ends meet where he was, and

I really had great difficulty in refraining from saying, "But, sir, you yourself were at the War Office when the arrangements were recently made, whereby the amounts were reduced to their present extremely small level, and you yourself were the most responsible for it, because if I mistake not, you were the person who suggested it." I have let my soul go on that subject this afternoon. I say that if you can, at such discussions as this, concentrate military opinion on certain points, believe me that although it may not bear fruit immediately it will not be neglected, because there is a genuine desire on the part of those who now administer the Army not to jog along in the old ruts, but to obtain efficiency—and to obtain efficiency by asking the nation, as far as they can, for the supplies which are necessary. I apologise to you for having taken up your time for so long, but I conclude by moving a most hearty vote of thanks to Major Churchill for his excellent address.

RASPLATA.

("THE RECKONING.")

By Commander VLADIMIR SEMENOFF, Imperial Russian Navy.

Translated, by permission of the Author, by L. A. B.

Continued from January JOURNAL, p. 80.

CHAPTER XI.

THE "DIANA" BREAKS THROUGH—A SURPRISE WITH OUR COAL—"PLEASE TO SEE THAT MY ORDERS ARE CARRIED OUT!"—OUR CRUISE SOUTHWARD—THE END OF THE "DIANA'S" WAR SERVICES.

TOWARDS 8 p.m. we saw once more, though indistinctly, several small Japanese cruisers to the south-west, two armoured cruisers to the southward, the main fleet steaming away to the eastward, and to the north-east the *Chin Yen* with her consorts.

To the south-east, precisely where we wanted to go, were numerous destroyer flotillas.

A species of council of war was held on the bridge. It voted in favour of breaking through to the south-east. At first sight this seemed a strange proposal, but it proved to be right in the end. We reasoned as follows:—Probably the Japanese destroyers would not expect us to do such a mad thing, and would therefore not be prepared for it. Moreover, they might easily take the *Diana* for their *Yakumo* in the dark, and think that the latter had been sent with despatches to Japan. If we chose another course on which we might meet Japanese cruisers or battleships, our identity would be quickly revealed. If we became involved in a night action, they would all go for us. There remained the question, how we should act towards hostile torpedo craft, so as to prevent their recognising us and attacking us. I made a proposal, which at first met with general opposition, and nearly raised the suspicion that I was not in my right mind. I proposed simply to do nothing. If, for instance, we were to light up any destroyer with our search-lights and fire at her, we should bring the entire flotilla down on us. Against an attack in numbers we were powerless. Our after 6-inch guns we dared not fire, for fear of loosening the supports over the damaged deck below. Consequently we were practically undefended against attacks from astern. But on each beam we only had two 6-inch and ten 12-pounders available. That was very little.

"But are we not even to light up and fire on a destroyer actually firing a torpedo at us?"

"Certainly not! A destroyer would only be able to make us out at quite short range. She must adjust her director, after estimating our course and speed, in a few seconds, and that is no easy job. Is it likely that she will hit us? Do you think that a destroyer, which has once shot past us, can turn round, chase and overtake us and attack anew? In the dark she would simply not find us. But when once we begin to light up and fire, in the first place, any destroyer can find us, in the second place, more destroyers will approach from all sides. With our big hole we can't stand a hit from a torpedo. If we are unlucky and get hit, we shall go down, and then, we can have a parting shot at the boats, to wish them farewell."

The captain entirely agreed with me and issued orders accordingly.

"We'll do it," he said, smiling, "although it is quite a new method of repelling torpedo attack. We are probably the first to try it."

"I am confident that it will succeed."

"If we remain alive we shall prove it, and if not the opposite."

Soon after 8 p.m. the *Diana* put her helm a-port and separated from the squadron on the course which had been determined upon.

A destroyer joined us. We asked her for her name. She replied *Grosovoy*.

This circumstance was specially favourable for our plans. Every Japanese might think: there is a cruiser which looks like our *Yakumo* and she has a destroyer in company—they are sure to belong to our side.

Towards 9 p.m. we reached the part of the sea where hostile torpedo craft were swarming, and steamed through it until 10.15 (the time of meeting the last Japanese destroyer). There was no moon, but the night was not very dark. The sky was not over-cast, but only showed here and there light semi-transparent clouds. The stars showed faintly through these and just gave enough light for trained eyes to see a big ship at a distance of 1½ miles, and a destroyer at 5 to 6 cables [1,000 to 1,200 yards]. To "see" of course only means to make out something vaguely.

During this hour and a quarter we "saw" nineteen shapes, which we took to have been hostile destroyers. Every time we sighted such a shape we at once altered course largely and endeavoured to prevent the distance being decreased sufficiently for us to be made out. In the nineteen cases we succeeded in this thirteen times. Only six destroyers attacked us. They fired eight torpedoes at us, but not one of them hit us. (This last statement is really superfluous, for if any one had hit us, I should not be in a position to communicate my narrative to the reader.)

We never switched on our searchlights and we never fired.

I believe that this method of receiving torpedo craft was only possible with a reliable "fireproof" crew, such as we had on board. One only need think of the panic on 13th April, and how we all fired into the water. It was very different now.

I cannot conceal the fact that two shots were fired. But the circumstances extenuated the offence of the gun-layers. They were as follows:—

Towards 9.30 the officer commanding the stern group, Sublieutenant Sh—— came running up on the bridge.

"Permission to open fire."

"In no circumstances."

"The two boats which have already attacked us once on opposite courses, are chasing us. They seem to be overhauling us."

"If it only seems so," interrupted the torpedo lieutenant, an authority in this case, "then there is nothing to fear for the present. Their excess of speed is not much. To fire torpedoes after us is useless. It is only when the boats come up abreast that the situation changes."

Suddenly there was a greenish golden flash right aft in the ship. The sharp report of a 12-pounder shot reverberated through the still night.—The same thing again.

"Your group is firing without you being there! What are you still standing about here for?" I shouted at the officer. But the fine young fellow had already jumped off the bridge at one bound and was tearing off to his guns as if the devil were behind him.

Once more the ship was hushed in utter silence, which was only interrupted from time to time by the voice of a signalman or lookout-man calling out: "Four points on the starboard bow, sir!"—"On the port beam, sir!" and the corresponding orders from the captain: "Hard a-starboard!"—"Hard a-port."

A considerable swell was coming in from the south, making the ship roll from 5° to 7° both ways. The destroyers must have felt it still more, and of course this did not increase their chances of making good practice with their torpedoes.

Towards 10 p.m. a Japanese destroyer passed us on an opposite course and fired a torpedo at our starboard side from a distance of barely 1½ cables [300 yards]. We not only saw the torpedo fly out of the tube, but heard the characteristic sound which always accompanies the firing of a torpedo, like the snort of some big animal.

"He is running straight," said the torpedo lieutenant, and leaning over the bridge rails, followed the air bubbles which indicate the track of a torpedo, with a professional eye.

There were some moments of acute suspense.

"Missed!"—Our torpedo lieutenant appeared quite to sympathise with his brother torpedoist's failure.

Every one heaved a sigh of relief.

"We don't seem to shine compared to the gunners," was the captain's jocular comment. He was a former torpedo specialist himself.

At about 10.15 p.m. we met an enemy for the last time. We nearly ran over a destroyer crossing our bows at full speed. We only just cleared one another. The boat evidently took us for Japanese. He showed a light signal, apparently a recognition signal, and disappeared into the darkness.

At 11 p.m. we sighted the northernmost light on Shantung. Half an hour later, having fixed our position by its bearings, we altered course to S. 23° W., which was to bring us, according to our plan, into the southern, less frequented, part of the Yellow Sea. We now only met some Chinese junks, and not many of those. It was clear that we had already left the waters in which the two belligerents were operating. We could now think of taking a rest. The men had in any case to remain in two watches, as regarded sleeping, and no one was allowed to leave his fighting station.

Many authors of narratives and reminiscences of war time describe the high state of nervous excitement which dominates all participants long after the battle. Many stories tell of disturbed sleep and wandering minds, and how easily one succumbs to any external impulse. Personally, I have never observed anything of the kind. Some facts which I had noted (in my diary) seem to prove the contrary, that is that after a battle sudden relaxation of the nerves takes place, so as to nearly amount to insensibility.

During the night of 10th-11th August I have seen men who, on being relieved, quickly sought a snug corner near their fighting stations and at once went off into a deep, sound sleep.[1] All the same these men had previously done their work without showing signs of special fatigue, and had carefully passed on their orders.

One of the officers manifested such a degree of "insensibility" that the French looked upon him as one of the Wonders of the World when he reached Saigon.

Before the battle I had given orders that the bodies of those who might fall were to be taken up on the after-bridge. Until such time as they could be buried, they were to be laid down in a row on a tarpaulin, covered with a second tarpaulin, over which was stretched an ensign.

When the order allowing men to fall out for rest, but to remain near their stations, reached the commander of the stern

[1] I can give the assurance that so long as I was at the theatre of war —that is in the first or second squadron—I never dreamed of the war at all. This only happened to me once, and under very peaceful conditions, for I was travelling from Saigon to Libau. It was at the Wirballen Station (Russo-German frontier), where we were spending the night. I dreamed of the *Diana's* sick-bay, of the deck buckling on which we were at work. I fell out of my bed shouting "Shores, bring more shores," much to the alarm of the other travellers.

group, he thought of the after-bridge as a very suitable place for him to rest. At that time there were seven corpses on it, laid out on a large tarpaulin, the unused part having been folded up several times. This would make a capital mattress. How delightfully comfortable! There really could not be a better place!

Towards three o'clock in the morning, one of the men who had been severely wounded died. The well-drilled sick-bay men carried the body up on the after-bridge. When they tried to place it in a row with the other corpses, they felt in the dark an officer's great-coat. They came to the conclusion that it would not be proper for the officer's corpse to be lying between those of two common sailors. "His honour" ought to be at one end. No sooner had they seized the presumed corpse by his shoulders and feet, when he offered desperate resistance and sat up.

"What's up? Have they sounded the bugle?"

"No!"

"Then what do you want with me, confound you! Can't you leave me in peace, you infernal——"

At first the men were staggered, for they thought that one of the corpses had come to life. But when they heard "his honour's" language, they realised that he must be quite well.

"We only wanted to make a little room, your honour. We have just brought up another body. He is only just dead."

"That is quite another story; you might have said so at once," the sublieutenant replied. He rolled the tarpaulin back a little, and moved further along it. Then he looked on whilst the "new one" was laid out in the proper way, that is, on his back, with the arms crossed in front, then he once more curled himself up and slept soundly, side by side with his silent comrades.

I did not manage to get much rest that night. The swell was hardly perceptible, yet the ship was rolling 5° to 7° both ways. This must have been caused by the water which had lodged on top of the armoured deck. But it was not the rolling which kept me on my legs, but something much worse. The flooded compartments were in direct communication with the sea outside. Every time the ship heeled over to starboard the pressure in them became so great that the thin deck, which we had only wedged down temporarily, received a violent shock. The shores "complained" and the wedges moved. The water squirted up with a hissing sound from under the packing we had placed over the leaky seams, and the wooden plugs flew out of the rivet holes with a report like a pistol shot. We were continuously at work, and had constantly to place new shores or replace the old ones.

"You boasted! now we see the consequences. You old chatterbox, why couldn't you hold your tongue?" I said to the carpenter. I believe I really did not know myself whether I was blowing him up in earnest, or whether I merely wanted to

cheer up myself and the others by putting everything down to this unlucky remark. The carpenter considered himself guilty in any case. He crawled about on all fours in the water,[1] which was washing about the deck, lamenting: "It was a sin—a great sin! God forgive me! If only the wind does not freshen!"

God forgave. It did not freshen up, and the swell even went down somewhat towards daylight.

I was just dozing a little in an armchair on the bridge when I was suddenly awakened. It was quite light, and absolute silence reigned everywhere.

"The enemy?"

"No, no," replied the navigating officer, who was shaking my shoulder not very respectfully. "The chief engineer has just been to see the captain. Our coal is giving out. We are going to Kiaotchou, and that means that we are going to be disarmed."

"I don't understand anything, my dear fellow. Give me one minute to recover my senses.—Now, let us have it all over again."

He told me again. It seems that there had been a misunderstanding—God knows by whose fault. The chief engineer, in speaking of economical speed, had counted on ten boilers (instead of twenty-four), whilst the captain had thought that we could keep steam in all boilers so as to develop our full power any moment. But our coal would only last if we economised steam, that is, coal. It could not last under the captain's conditions.

I turned to the conning tower.

The navigating, gunnery, and torpedo officers — all the captain's chief assistants—were there. Only the chief engineer was absent. He had gone below again after having made his wretched report.

The captain expressed himself very categorically. This time he did not, as was his custom, give short, definite orders, but went fully into all the considerations of the case.

As we were unable to employ our stern guns the ship's only safety lay in her speed. He must be able to develop her full power at any moment. It was true, we had water-tube boilers, and when steaming economically with ten boilers we could raise steam in all the others in forty minutes and go on full speed. But the enemy (assuming that he also only possessed a speed of 17 knots) had half an hour, which sufficed to bring him up to effective range (30 cables = 6,000 yards) from us. When the adversary had reached that point, he would be able, thanks to his superior speed, to choose his distance, and fight

[1] Another detail. Our armoured deck did not possess a single sluice valve with which the water could have been drained into the lower spaces, where the steam pumps could have reached it. We had to bail it out with buckets.

as suited him best. In another ten minutes we should be at his mercy.

Only the three bow 6-inch guns were available.[1] Even a ship like the *Niitaka* was more powerful than we. Moreover, in an action with her we should be practically standing still. The captain thought it would be criminal to expose his ship to such a situation. The ship would be doomed to certain destruction, without the least prospect of causing the enemy any damage.

We must unquestionably get more coal. Where from? At Kiaotchou? According to the German declaration of neutrality we could not stay more than twenty-four hours in that port. Though that would be time enough for coaling, should we, in that time, be able to make the hole watertight? For this we should have to rely solely on our own means. According to the German declaration of neutrality, if we were repaired by the dockyard we should have to disarm. Could we carry out these necessary repairs at all with our own means?[2] What was the nature of the hole? We only knew that the water-tight bulkhead at frame No. 103 was destroyed, and that the ship leaked heavily between frames No. 98 and 108—that was all. Should we only go in and coal? The telegraph would at once have told the Japanese of our arrival. On going out again we should at once come upon the enemy, and "the ship would be doomed to certain destruction, in a criminal manner," as the captain expressed it.

If we allowed ourselves to be repaired we should be disarmed.

Apparently there was no possible way out of the difficulty.

Suddenly the paymaster, who happened to be on watch, made a proposal, which at first seemed to us all quite mad.

"All that is left for us now is to go to the nearest French port," he said. "According to the French declaration of neutrality the belligerents are permitted to stay in their ports for an unlimited time. Furthermore, they permit the execution of all repairs, with the assistance of any local establishment, except an increase or any repairs to the armament."

"But, in the devil's name, the next French port is Saigon! Our coal won't take us there neither."

"Oh, bother your coal! Is there no such thing as a merchant steamer on the way? We stop any steamer we meet, and take out some of her coal. We only leave her enough to reach the next port. Our Government will pay her for the delay and for all losses, and she will after all be pleased with making a profit. In the first instance, we must get to some

[1] [The *Diana* carried eight 6-inch guns—five forward and three aft The latter could not be fired, and of the former, two had been landed at Port Arthur.]

[2] It was afterwards found that we could not have done so, even in more than twenty-four hours.

out-of-the-way place. The Japanese would never discover our whereabouts. If we can get repaired we shall be in a very different position. The French are, after all, our allies. Perhaps we could even replace in some out-of-the-way bay the guns which we were made to land."

"Now you are allowing your imagination to run riot," broke in the captain, who had suddenly dropped his imperturbable calm, and even became quite cheerful. "But the idea is not bad! We will see at once whether our coal would last."

Calculations were at once made.

The captain explained that if we did not sight any enemy either to-day or to-morrow it would be very improbable that we should come across one south of the latitude of Shanghai. The need to keep steam in all boilers would then disappear of itself. There might be some Japanese in the Formosa channel, but that was also unlikely. Consequently, we should be able, for the remainder of the distance, to put out fires not only in fourteen but in sixteen boilers, and steam with only eight.

But even then our coal would only take us to within 500 miles of Saigon. If we took into consideration that we might meet with strong head-winds, it would be still worse. Our only hope was to meet one or two merchant ships. About the weather prospects we did not speak—as if by common consent. August, with its typhoons, is a very disagreeable month in the China Sea, September alone is worse. If we were to get into a typhoon with that hole in our side!!

At 9 a.m., whilst we were still debating and calculating, a ship hove in sight, which appeared to be chasing us. At first we went on full speed, hoping to get away from her. She continued chasing us at high speed. End on as she was, we could not make her out. Suddenly she seemed to have made us out and turned off short to the East. As soon as we saw the ship broadside on we recognised her at once. It was the *Novik*. There was not another little ship the least like her in the whole of the Pacific. We began making distant signals to her, but she would not look our way. The *Novik* evidently took us for a Japanese. We sent the *Grosovoy*, who had followed us faithfully, to her to clear up the misunderstanding, and to ask for news.

Whilst the *Grosovoy* was chasing the *Novik*, we moved ahead dead slow; in fact, we nearly remained on the same spot.

This delay we employed in rendering the last honours to those who had fallen. The whole eight were laid out in a row between the after 6-inch guns. Each body was sewn up in canvas with a weight at his feet. They all looked alike, except that of Sublieutenant Kondratyeff, on which we had placed his sword and cocked hat. A short funeral service was held in the presence of the whole ship's company. Then the captain, the officers, and the oldest members of the ship's company lifted up the bodies. The guard presented arms, the drums beat a

roll, and the funeral procession moved slowly on to the poop. From there one body after the other was allowed to slide slowly overboard along an inclined plank. Slowly they sank in the greenish sea down to the depths below, they who had once been our shipmates.

I remember well the beautiful words of our priest. He spoke of the dead with so much heartiness and fervour, and never became sad or lugubrious. He conducted the service with as much love and warmth, as if he were celebrating resurrection instead of death. How full of love and faith was his voice, as he leant over the pooprails, blessing the dead for the last time, and praying: "Take, O Lord, thy servant, fallen in battle."

I don't know if these words form part of our Liturgy, but they were certainly very appropriate.

I watched our ship's company carefully, and tried to guess their feelings. I confess that I had feared that this ceremony would have a depressing effect on them. Our men don't like burials at sea. How often, in my long sea service, have I not heard men who were dangerously ill begging the doctor to keep them going till the ship got to Russia. If that were impossible, they wanted at least to live until the next port was reached. Every one wants to have his modest grave, even in foreign soil.

Many were moved, but none of them were strongly affected or depressed. Of course, habit had much to say to this. They were accustomed to funerals from Port Arthur. Still, I think that our priest had the greatest merit in this.

As it was quite calm, and there was no suspicious smoke in sight anywhere on the horizon, we stopped engines and sent over our best divers to examine the underwater damage. We were in hopes of perhaps being able to make it water-tight from outboard, as we could see that the shoring up from inboard was insufficient. When we had got the dimensions of the hole, we had to give up this idea. The dimensions were such that it would have been impossible to bolt on a wood casing, filled with bedding. It was not even possible to place a collision mat over it, as the hole reached aft beyond the "A" bracket of the starboard screw. Whilst steaming ahead, if one of the lines securing the collision mat in place were to carry away or become shifted (and that could always happen), it was bound to foul the screw shaft and perhaps bring up the engine.

The *Grosovoy* returned at 1 p.m. She reported that the *Novik* had not been damaged in the action. The ship was going to Kiaotchou to fill up with coal and stores, and then meant to go to Vladivostok, steaming round outside Japan.

Unfortunately, we did not get into direct communication with the *Novik*. Perhaps there was something not right between the two captains.

Our captain did not approve of the *Novik's* plan.

"If I had his speed I should go through the Straits of Korea," he muttered to himself. "Outside she'll probably be discovered."[1]

The *Grosovoy* received orders to join the *Novik*, and place herself at her captain's disposal.

The *Diana* proceeded south.

The news of the *Novik's* decision perturbed me very much. Reason here was in opposition to the dictates of the heart. I knew only too well how justified the captain's doubts were. I also quite appreciated that the wounded *Diana*, with her 17 knots, was not to be compared with the *Novik*, which was quite intact, and had absolutely no rival as to speed in the whole Japanese Navy. And yet down in my heart I felt the tantalising thought: the *Novik* is going to Vladivostok, and we are not.

I was not the only one who suffered under these contradictory feelings. Towards three o'clock, tired and in ill-humour, I sat down in the mess and, quite mechanically, drank a glass of our hot, but absolutely tasteless, tea[2] (the concoction of this beverage was one of the secrets of the pantry), when the first lieutenant sat down near me. He at once began to speak of what was so much on our minds.

"Kindly tell me, quite openly, as a messmate—what do you think of this? Everything hinges on that decision about putting out fires in fourteen boilers. It is not yet too late to carry out our original plan. Can't we risk it? Tell me openly."

"You know my persistent attitude towards our old maxim: 'Be careful and risk nothing.' Come what may, I should risk it."

"Well then!" my messmate exclaimed, his face literally beaming with pleasure.

"The captain has decided differently. What can we two do? There are only two of us."

"No, no; we are also on your side," a number of officers suddenly broke in. They had evidently been awaiting the result of our conversation from a distance, and were now coming across to us. I turned round and counted them. They were five (I was the sixth)—just half the mess. Without another word I took up my cap and went straight to the captain, this time not in my capacity as his second in command, but as the officers' representative and spokesman.

I began by opening my heart to the captain. The *Novik* was going to Vladivostok, the *Diana* not. What did our pride and the good name of our ship alike demand? Of course it was a risky undertaking, even desperate. But if it succeeded? If we did not try, who would ever enquire about our reasons?

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[1] Unhappily, this prediction came true.

[2] [In Russia, tea is usually drunk out of glass tumblers in metal stands.]

Every one would say at once: "They have turned tail." Rather go down than face such disgrace.

The captain shrugged his shoulders angrily and pulled at his beard, but he replied in the tone of a friendly conversation. He repeated what he had already said once, and pointed out the great difference between the situation of the *Diana* and that of the *Novik*. He ended with the words: "Now, listen! When you made me the suggestion last night of breaking straight through the torpedo craft, without lighting up search-lights or firing, even when attacked by them, I agreed. It was bold, not to say rash, but expedient in our special case. We might hope to save the ship by risking that much. But now you are proposing to me to destroy the ship, without doing Russia any good and without any hope of damaging the enemy! When we have repaired her, and once more made a sound ship of her in one of the ports of our ally, we can order a collier (or as many as we like) to any rendezvous we may choose. Then we can go to Vladivostok—such is my intention—or, if ordered from St. Petersburg, commence independent cruiser operations. And we are to give up all these prospects and expose the ship to destruction? Why should we do this? Only out of personal considerations? From fear of what others may say? No, and again no! I have come to a decision and don't mean to depart from it."

Strange to say, I could not bring forward any very plausible arguments against this; still, the more the captain said, the more I pressed him. "But the *Novik* is going to Vladivostok—why should not we risk it? We still have some chances in our favour." At last I brought up my big guns.

"I am not merely giving you my personal and private opinion, but that of the majority of the officers, who——"

"I have not called together a council of war, and have not charged you to collect the votes," the captain broke in sharply. "I have to request that you will see that my orders are carried out." With that he turned short round, and went into the conning tower.

Our voyage to Saigon does not offer anything of special interest, from the military point of view. I shall therefore not give a detailed account of it.

On the evening of the same day (11th August) we buried yet another bluejacket, who had died of his wounds. The doctor was now only anxious about one of the remaining nineteen wounded. The others he hoped soon to have "off the list," as the phrase goes. As the sick-bay was completely destroyed, all those who were at all seriously wounded had been put into officers' cabins.

When we had passed the latitude of Shanghai we put out fires in sixteen boilers and began to economise coal. The weather was favourable. Only in the Formosa channel we had a fresh breeze. Luckily, it was a fair wind, so that the sea was

on the port quarter. We again had to work below, but this time we had plenty of time, and it was no longer a case of "bending or breaking." In the spaces concerned there stood a whole forest of spars and shores.

"A regular Acropolis," was one of the jokes.

"Not the Acropolis, but 'The Last Days of Pompeii' by Brüllow."[1]

They might look as they liked, these spars at least stood the weather.

But there was a danger approaching us in a totally different direction, and, moreover, a danger which we could only overcome by luck—and that we had had luck up to now no one could deny. Our coal was running out.

The hopes of falling in with a merchant steamer were not fulfilled. Up to now we had seen nothing.

"Very stupid," said the captain, when the chief engineer reported early on the morning of 15th August that our coal would not last quite twice twenty-four hours more. "Of course I mean our fate," he added quickly.

Our situation was beginning to be unpleasant. Should we go to Hong Kong, to the allies of our enemy? A most unattractive idea!

A sudden reminiscence of a former cruise of the captain's saved us from this situation. He remembered having called at a small port called Kwantshau about two years before the war with a cruiser (*Sabyaka,* I believe). Kwantshau is situated on the peninsula which stretches out from the mainland towards the island of Hainan. The French had acquired some territory there from the Chinese, to be used as a small base for their navy.

Could we get there? If the naval base has been completed, then it is sure to contain some coal. If it never got beyond the mere project, then at least we can obtain wood. The French are, after all, our allies.

On the evening of 16th August we entered the mouth of the Kwantshau river just before sunset. We anchored for the night, and proceeded 25 miles up-stream next day to the French colony.

The French received us with cordial friendship and were ready to do anything in their power for us. The naval base had unfortunately never got beyond the project stage. The colony at the time only possessed 200 tons of coal, and this was not intended for ships that might call, but for their own requirements. The French let us have 80 tons out of these 200—just the amount we required for twenty-four hours' steaming. We were indeed grateful, even for that amount. These good people had shared with us like brothers. Between what we had left in the bunkers and what they gave us here, we

[1] [Russian painter of historical subjects, born 1799.]

could reach Haiphong, and there we should find as much coal as we wanted.

On 19th August we left Kwantshau and anchored in the Bay d'Along next day. Here we found lighters with briquettes waiting for us. We filled up our bunkers to full stowage.

On 25th August the *Diana* arrived at Saigon.

The captain had already sent off his telegraphic report to St. Petersburg on 20th August. Consequently, we thought that as a matter of course the first person who should set foot on our deck would hand the captain a cipher telegram signed by one of our principal home authorities.

Neither that day nor the next did anything of the sort take place.

The local authorities had been informed about us by their colleagues at Kwantshau and Haiphong. But now they began to feel uncertain. Why was there no telegram from Paris?

"Haven't you informed your Government?" asked Admiral de Jonquières. "And why is our Government acting as if it knew nothing?"

Who could answer that? We did not understand anything ourselves.

Instead of the expected instructions from St. Petersburg, the Saigon newspapers brought telegrams of the "Havas Agency." These stated that the Russian Government had decided to disarm the *Tsesarevitch*, *Askold*, and *Diana*, which had reached neutral ports.

As regarded our ship we did not believe this. What possible grounds could there be for voluntarily disarming a ship which had entered the port of an allied Power in need of repair? This Power did, after all, permit the ships of both belligerents to remain in her ports for an indefinite time, and to make use of all its appliances for the repairs of hull and machinery.

The eager sympathy shown by the colonial authorities at Saigon was in marked contrast to the cold reserve of Paris, and to the ominous silence of St. Petersburg.

On the second day after our arrival constructors from the dockyard came on board. They asked for our ship's plans, so as to prepare the dock for her. Moreover, they examined our damaged bottom as far as possible, and promised to have it put to rights within ten days or a fortnight.

"What nonsense!" exclaimed the Admiral, when we expressed to him our apprehensions in connection with the obstinate silence of the two capitals. "Don't these people out there understand that it is your turn first and then ours? We must hold on to our declaration of neutrality with both hands. If we get involved in war, we are in the same situation as you now, and shall have only Saigon as a solitary naval base."

Meanwhile, time was passing.

The chief constructor of the dockyard came on board nearly every day to ask if we had any reply from Europe.

"Just wait," he said; "I suspect that the reason why they don't like letting you go into our dock is that in that case they would have to do the same thing for the Japanese. The dock is right in the centre of the depôt of our submarines. But then they ought to send a reply of some kind! We can repair you without docking. Of course not here in this strong current. Here it is impossible; but you might go into some sheltered anchorage like Kamranh Bay or Port Dayotte. We should build a cofferdam as in Port Arthur.—You know the kind of thing.—Workmen and material shall be there. Why, the devil take me if I don't go there myself, as a stranger in want of amusement! We'll make that damaged side stronger than it ever was. But a reply—a reply! Get us a reply!"

Whence were we to get this reply? I ran about as distracted as all the others, anxiously awaiting the reply which was to decide our fate.

Through our agents and consuls we had ordered a number of colliers to different ports. These were ready to go to sea on receipt of a prearranged telegraphic order, and to meet us at certain rendezvous. All we now wanted was some kind of reply, some definite order from St. Petersburg, even if it were merely the information that we could not be docked, but that we could otherwise do what we liked. We should have done something fast enough. (Of course, with the assistance of our good friends, who would not have refused.)

At last the reply came. It was such as neither we nor the local Frenchmen had thought possible.

On this fatal day my diary merely contains this entry: "*September* 4.—It is all over! This morning at eleven o'clock the telegram came to disarm."

The text of this telegram I did not note in my diary, but I can still see the rag before my eyes. The telegram was not even in cypher.

"By order of the General-Admiral[1] the ship is to be paid off, to strike her colours, and to be disarmed as directed by the French authorities.

"(Signed) AVELAN.
"*Minister of Marine.*"

What went on on board was not far removed from open mutiny.

"We won't allow the colours to be struck! We won't allow the ship to be disarmed! We'll go to sea!" were the shouts to be heard in the mess.

It was impossible to stem their outbreak of rage. I let them shout themselves hoarse, and then begged to be heard.

"Gentlemen, the fate of our ship is sealed! All our protests cannot revoke the General-Admiral's orders——"

I was interrupted by murmurs.

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[1] ["Lord High Admiral," usually held by a Grand Duke.]

"Allow me to finish! The ship is ordered to be disarmed, but this can only be done officially in a few days. But half an hour suffices for the captain to order us all out of the ship for insubordination and improper criticism of our superiors, during a state of war. Whilst the ship is still in commission and he is not obliged to give any account of his actions to the French Government, the captain would be absolutely justified in this. But when once we are ordered out of the ship, we scatter to the winds—possibly to the Second Squadron."

The captain approved of the idea, only, of course, he did not wish to leave the ship quite denuded of officers. I received my orders separately, the remainder drew lots. Chance decided that the commander, one lieutenant, three sublieutenants, and two engineers were to leave at once. There remained on board two lieutenants (one as executive officer), two sublieutenants, and two engineers. The doctor and the priest were not considered. They could not leave in any case.

Meanwhile, I telegraphed to Admiral Rojestvensky:—

"Our ship is being disarmed. I beg that, in view of our former services, we may be appointed to the Second Squadron. We cannot remain idle when our brother officers are fighting."

I received a reply in the affirmative.

Soon after there appeared in the various hotels of Saigon a number of *étrangers de distinction*, who were waiting for the next opportunity of returning to Europe.

When the *Diana* had been officially disarmed, the captain handed to the French Governor-General a nominal list of the officers and men actually on board the ship, on which it was declared that the persons named thereon would no longer take part in the war. Such a declaration was synonymous with being a prisoner on parole. It relieved the French authorities from the obligation to watch the "interned" Russians, so as to prevent their escape.

Of course *we* were not on that list.

On 13th September the first section of the "Excursionists" (three in number) sailed on board a freight and passenger steamer,[1] and on the 15th Messrs. Bernard Christian, author (I had kept the initials B. C.[2] on account of the marking on my linen), Frederick Schoeschling, engineer, and two mechanics, who had been employed at Dalny, Meier and Schulz, left Saigon on board a steamer of the Messageries Maritimes. The two last named even travelled second class. They did not wish to arouse any suspicion, as they only knew Russian.

[1] These three were unlucky. They did not get home in time for the Second Squadron.

[2] [The Russian letters W. S., Wladimir Semenoff.]

END OF PART I.

(*To be continued.*)

THE EMPLOYMENT OF MACHINE GUNS IN THE FIELD.

Abridged from Streffleurs Militärische Zeitschrift, May, 1909.

Contributed by the General Staff.

A JAPANESE officer has published an interesting essay based upon his experiences during the late war in command of a machine gun battery. In the following pages we reproduce the most important passages.

The Russo-Japanese War is the first in which machine guns have been used on a large scale. Since, however, the instances of their use are as yet too little known to base general conclusions upon them, the following deductions rest solely upon the personal experiences of the author.

The heavy Japanese losses in the battle of Nan Shan and before Port Arthur show that machine guns can be used to great advantage in defence. In these operations their power was fully utilised. It is the result of its high rate of fire; its steady shooting from the tripod; its facility of concealment and the small target consequently offered to the enemy; its mobility, due to its light weight; and, finally, of the fact that a sufficient supply of ammunition can be brought up and placed in readiness before the battle commences. Yet defence in itself is essentially passive, and it depends upon the course adopted by the enemy, and the action which he takes, whether the machine gun will have an opportunity of developing its full effect. Hence we may deduce that the tactics of machine guns should be mainly offensive, not only in the attack but also in a combat of a defensive nature. If the machine gun were tied down to the actual defensive position, it would be equivalent to sacrificing a portion of its efficiency.

In the attack, every attempt must be made to develop the full power of the machine gun. This makes the study of the tactical employment of machine guns all the more important. The Russians mostly remained on the defensive, and also adopted defensive tactics with their machine guns, while the Japanese favoured the offensive, and naturally adopted offensive tactics with their machine guns.

The Russians frequently made use of entrenched positions in the field. The following rules may be given for the tactics of machine guns in the attack of such positions.

When the general reconnaissance is made, part of the dismounted machine gun companies attached to the infantry advance under cover, using all possible precautions, to within 5 or 6 miles of the position prepared for defence by the enemy. They there take up a suitable position to check any forward movement on the part of the enemy. The remainder of the machine gun companies accompany the infantry and artillery of the reconnoitring force. The horsed machine gun battery accompanies the main body of the cavalry, which reconnoitres the flanks and possibly the rear of the enemy.

To prepare the attack, and to cover the occupation of the artillery positions, the machine guns should usually be pushed forward, in the firing line with the infantry and artillery, to within about 1,100 yards of the enemy, on weak points on the flanks or even in the centre of the position. They must then entrench and be ready to assist at the moment when the attacking artillery reaches its positions. If this takes place by daylight, the machine guns must open a covering fire from their entrenchments in order to render it easier for other troops to advance.

The artillery at first opens fire, from its first positions, at daybreak, with the object of clearing up the situation (preliminary combat). In the meantime the commander and the officers of the machine gun companies reconnoitre the enemy's position and the ground over which the further advance is to be made. The machine guns keep under cover and do not open fire unless urgently required.

When the front upon which the main attack is to be made is selected, the heavy guns and field guns open fire, while the infantry advance by successive stages by night, or even by day. The machine guns cover the advance by their fire. When they have achieved this object, and when the infantry have established themselves in shelter trenches within 700 or 800 yards of the enemy, the machine guns must be advanced by rushes to the same position, to be ready to open fire at decisive range. If the ground affords no cover, it is better for the machine guns to go forward singly rather than simultaneously. For this advance the machine gun must be dismounted, and the gun, tripod and ammunition gradually brought up to the selected place. When this has been reached, the commanders and officers reconnoitre the enemy's position more closely.

If it be discovered that the enemy, during the night, is bringing up his field guns to short ranges (within 1,100 yards) to destroy our machine guns, these must open fire "by surprise" and shoot down every man and horse of the artillery. If they are too late to accomplish this, then, in order to avoid losses, the machine guns must shift their positions to suitable cover. The machine guns can only hope to produce effect on the artillery of the defence when they can approach to within close range by night, in a fog, or under natural cover, and then deliver a vigorous and unexpected attack. The com-

manders of machine gun companies must use every endeavour to utilise such opportunities to the utmost.

To carry out the decisive attack, the infantry and engineers must advance under cover of darkness to within 330 to 440 yards of the enemy and must there construct strong shelter trenches. While this is being done the machine guns must remain in their positions and must endeavour to make the work of the other troops easier for them. The power of the machine gun lies in its fire effect; it is not in any way equipped to take part in hand-to-hand fighting. The above-mentioned advance of the infantry may be accompanied by a few machine guns in order that these may open "a pursuing fire" should the opportunity arise. This, however, must not be allowed to weaken the covering fire.

If the enemy is entrenched, and if his fire is not lessened by our artillery, then it becomes the duty of the machine guns to sweep his trenches with fire so that his men cannot raise their heads to look over the parapet. On other occasions, machine guns will be utilised to keep up an accurate fire upon such of the enemy's firing lines as are not entrenched.

As the attack progresses, the replenishment of ammunition will become more difficult; a sufficient quantity of ammunition must therefore be provided at the machine gun positions. This must, if necessary, be brought up by night.

The assault upon the enemy's forts and batteries is carried out simultaneously. The machine guns designated to open "a pursuing fire," and those detailed for covering fire, which can no longer fire without endangering their own infantry, advance at once in order to repulse vigorously any counter-attacks attempted by the enemy. If possible, these machine guns must take part in the attack on the flanking forts.

The machine guns of the reserve push forward and make preparations for a rapid advance. It is important to attack the flanking forts as soon as possible. Otherwise the attack may find itself exposed to a counter-attack from three sides at once. It will then be unable to maintain its position, and this may lead to the defeat of the whole force. The attack must therefore be able to reckon confidently on the destructive effect of machine guns, due to their power of concentrating fire on suitable targets. The attack must not allow itself to be driven back a single pace. It must be steadily borne in mind that retreat means destruction.

When an attack has succeeded, the greater part of the machine guns must open "a pursuing fire" on the retreating enemy in order to destroy him utterly. All the machine guns already in position must assist in this, except such small portion as may be required to assist in the attack on the neighbouring forts.

Horsed machine guns which accompany the cavalry in the pursuit should fully be able to make up for the weakness of the cavalry in fire-power.

With reference to the preceding remarks, we may say that in fortress warfare (before Port Arthur) the machine guns became of use at the moment when the investing lines were drawn close. When the main defensive lines were reached, the machine guns were only of service against sorties and counter-attacks. There was no room to develop their powers; they were tied to the ground.

In war in the open field, the power of the machine gun, due to its mobility and the smallness of the target which it offers, can always be fully utilised both in mountainous country and in the plains. It may be accepted as an axiom that the machine gun can be employed to better advantage in attack than in defence, in the open field than in fortress warfare.

"Machine Guns in the Field."

Under this title another Japanese officer has written an essay which is not in agreement on all points with that already quoted.

The author maintains that machine guns can be used equally well in the field and before a fortress, in attack and in defence. The characteristic of the machine gun, that it is able to deliver a heavy and effective fire in a very short space of time, makes it a difficult task for the bravest troops to cross a space swept even by a single machine gun. This experience was universal in the Russo-Japanese War. The machine gun is therefore also eminently suited for defensive tactics.

If machine guns be skilfully disposed at important points of the defensive position, making use of the ground so that they are difficult or impossible for the enemy to locate, the infantry garrison of the position may be much reduced. Not only is the position strengthened by the machine guns, but it becomes possible to annihilate the enemy's assaulting troops, if only a sufficient supply of ammunition is available up to the last moment. In future warfare the machine gun will be an important weapon.

In the attack the employment of machine guns appears less advantageous than in the defence. Since the machine gun fires the same ammunition as the infantry, it must, in order fully to develop its powers, be advanced more or less with the infantry firing line. But this is not so easy. Within 1,100 yards of the enemy the three men who serve the machine gun form a large and favourable target; and it is by no means easy to bring up machine gun ammunition under fire. But if it is possible to find a good position for the machine gun, and if it is well handled, its full fire-power can be developed in the attack as well as in the defence.

The construction of the present (Hotchkiss) machine gun is complicated, and jams occasion frequent interruptions of fire. It is therefore absolutely necessary to know the moment and the target at which fire is to be concentrated in order to produce

the desired effect. Failing this, the action of the weapon is restricted and its effect insufficient.

If the full fire-effect required by the tactical conditions is to be realised, the machine gun must have the same mobility as the infantry, and machine guns must be organised and equipped on an infantry basis.

In the 1st and 2nd Japanese Machine Gun Companies, the machine guns and ammunition had to be carried on ordinary transport wagons. They were therefore unable to keep pace with the infantry. On bad and hilly roads the march of the column was delayed and its length increased. The continuity of the column was broken; the machine gun companies could not keep up. It was difficult to keep the column together. In spite of all the exertions of the commanding officers, the men were over-fatigued and exhausted before the battle began.

Fortunately these machine gun companies were not with the field army, but before Port Arthur. By giving other transport to them their mobility was improved, so that it was possible to bring them up in good time. But if these companies had been attached to other divisions, which had to march long distances, great difficulties would have arisen.

The machine gun companies which were afterwards formed were supplied with one-horse carts. This improved their mobility on the march, but they still found it difficult to follow fighting infantry across country. Hence we may deduce that the equipment of machine guns must be such that they can follow the infantry anywhere, over hill and dale, through field and woodland, in order to give effective assistance in carrying out the intentions of the commander of the troops. The ammunition must always accompany the machine gun.

It would therefore appear desirable to transport the machine guns and part of the ammunition on pack horses, and the remainder of the ammunition and other stores in one-horse carts. If this makes the mobility of the machine guns equal to that of the infantry, nothing more will be necessary to enable them to fulfil their tactical duties.

As regards the choice of positions for machine guns, in open country, which affords no cover, it is best to follow the line of skirmishers and to co-operate with them in the conduct of the fire-combat. But if a hollow or an eminence, even the smallest mound of earth, is available, its shelter must not be disdained. For if the machine gun is in a good position and can maintain its efficiency to the last, it may produce such effect at a critical moment as to determine the result of the combat.

Changes of position must be carried out in accordance with the object of the combat, the situation and the nature of the ground. The leading principle is that the greatest possible fire-effect must be developed. For this, the following conditions are absolutely necessary:—

a. Distance from the enemy not to exceed 1,100 yards.

b. A position commanding the enemy, which must be convenient for the handling of the machine gun, so that it can support its infantry in advance or retreat.

c. A good field of fire, freedom of movement to front and rear, and no dead ground in front.

d. Possibility of supporting the advance of its infantry right up to the enemy's position.

e. It must be possible to occupy the position, and to replenish ammunition, without exposure.

Intervals in action should not be regular; on the contrary, any hollows and other cover should be utilised when setting up the machine guns in order to make it as difficult as possible for the enemy to locate them.

When the task assigned to the machine guns, and the position they are to occupy, have been decided upon, the commander personally reconnoitres the position. He assigns places to the sections and makes all necessary preparations. In a retreat, he brings the company out of the zone of fire and sends back an officer to reconnoitre a fresh position.

In open ground the machine gun company must be brought into position at full interval, in order to avoid any change of formation or movement to a flank under fire. Otherwise, the company marches straight on in column so long as it is under cover, unloads behind cover, and then occupies the position.

The pace of marching must be suited to the ground and to the tactical conditions, but must permit of the position being reached before the men and horses are exhausted. Before occupying the position, the roads leading to it are to be reconnoitred. The machine gun company is led by the senior section commander, or, if the section commanders have been called up to the position, by the senior non-commissioned officer.

Within 1,100 yards of the enemy, or when under fire, the machine guns advance independently into position. The commander hastens forward and points out its place to each machine gun. The advance of each machine gun into the position is made in the following order: Entrenching tools and sandbags, tripods, guns, and finally ammunition. In the attack on Nan Shan this method was found to answer well and to reduce the number of casualties in the company.

Changes of position must be carried out in good time, otherwise no effect will be obtained. Such changes are necessary when our own troops block the field of fire, in order to avoid hitting our own men. Before a change of position is made a reconnoitring patrol must be sent out to find the way to it. In changing position within 1,100 yards of the enemy the machine guns are not packed on the horses, but everything is carried by the men. For a pursuit the machine guns must be packed in order to enable the advance to be quickly made.

In retiring to a fresh position, the retirement must be made by sections, and a portion of the ammunition must be sent on beforehand. With isolated machine gun companies a change of position is always carried out by sections; the commander does not precede the company to the new position. If necessary, when changing position each section may be divided into two sub-sections.

The fire of the machine gun company is directed by the company commander. He points out the targets to the sections, controls the rate of fire, observes the fall of the bullets and the effect of sweeping fire, and orders changes of target.

The section commander observes the target closely. He assigns a section of the target to each machine gun, so that the whole target is kept under fire; he observes the movements of the enemy, and only allows fire to be opened when there is a prospect of effect. At fleeting targets concentrated fire is to be used; herein lies the strength of the machine gun. At such targets there is to be no waiting for orders before opening fire.

As targets for machine guns, cavalry and artillery at long range, as well as broad, deep and dense formations of the enemy, should be selected. Special good effect may be obtained against an advancing enemy.

The rate of fire depends upon the object of the combat, the situation and nature of the target, and the amount of ammunition available. At targets on which only slight effect is anticipated, slow fire should be used, while rapid fire is to be directed on an enemy advancing by successive stages or on the march, on reinforcements, or on troops advancing to the attack. Rapid fire is always to be used against cavalry and artillery.

Fire must not be opened prematurely; for the enemy will endeavour to locate the machine guns in order to bring a concentrated fire to bear upon them.

Fire effect depends on correct determination of the range, on quiet, accurate laying, and on observation of fire. It is advisable, when possible, to get the sighting elevation from neighbouring troops, and also to send out observers.

Strict fire-discipline must be maintained. Too much firing is unprofitable. Since the commander's words of command will not always be audible, attention must be paid to his signals.

Machine guns are also used in pairs and singly. The men must therefore be able to direct their fire themselves.

The range is either judged, or measured from the map, or found with range-finders.

The rate of fire is designated as slow, ordinary and rapid. With slow fire the trigger is pressed for one second once in every ten seconds; with ordinary fire, once in every five seconds; with rapid fire the trigger is pressed continuously, and loading is carried on without intermission.

In spite of these regulated rates of fire, it is absolutely necessary to pay strict attention to avoiding waste of ammunition. The target must be constantly observed and only those

points fired at on which the greatest effect is anticipated. Pauses in the fire will therefore be of frequent occurrence.

The maximum sweeping angle on either side is six degrees. To cover the whole width of the target a suitable aiming point must therefore be selected. When firing on wide targets, which are moving quickly forward or backward at short range, the sight should be removed to enable rapid fire to be delivered in any direction. This requires considerable skill.

Fire without traversing is used at troops in column, or emerging from a defile; sweeping fire at dense lines, troops in shelter trenches, and guns coming into action.

Jams must be immediately located and removed, in order to avoid a long interruption of the fire. It is, therefore, necessary for all men of the detachment to be thoroughly practised in taking the machine gun to pieces and replacing its parts, even in the dark.

Use of the Machine Gun in the Attack.—The advance or retirement of the infantry must be supported by machine gun fire. In attacking heights, especially when the ascent is steep, a vigorous fire must be kept up on the enemy's troops to prevent them from raising their heads above the parapet. The assault is to be prepared by machine gun fire, directed on the point of assault and the enemy's entrenchments. When pursuing a defeated enemy the machine guns must assist. In case the assault fails, they must cover the retirement. When the position has been captured, the machine guns must immediately press forward into the enemy's lines to prevent a counter-attack.

Fire at loopholes produces little effect, but must be carried out when it is necessary to support the infantry advance, provided that one's own troops are not endangered thereby. In the attack on a fortress the machine guns advance with the infantry and occupy important points from which they can oppose sorties. Flanking fire and reverse fire from machine guns are very effective. In mountain warfare great attention is to be paid to securing positions from which such fire is possible; this was proved by experience at Port Arthur.

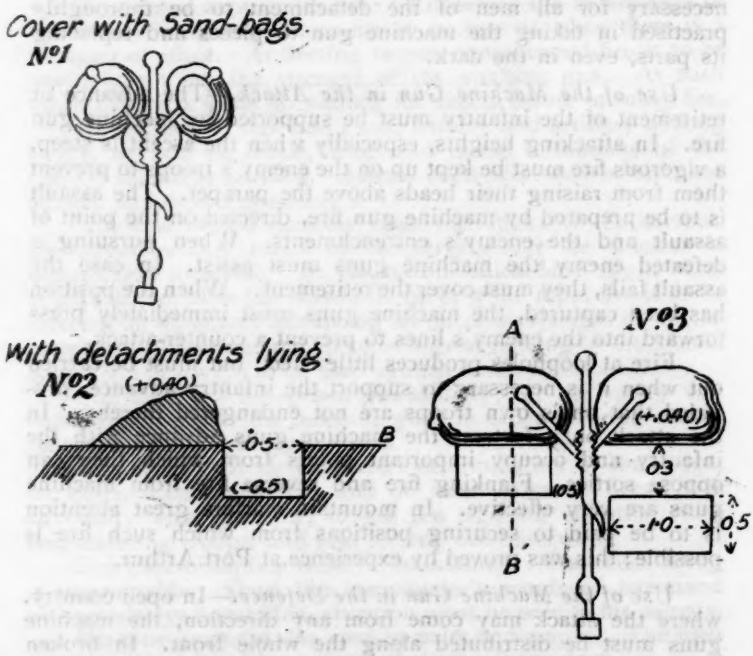
Use of the Machine Gun in the Defence.—In open country, where the attack may come from any direction, the machine guns must be distributed along the whole front. In broken ground all points are to be occupied at which the assailant might otherwise approach, especially at night, one or two machine guns being posted at each of these points. Several machine guns are to be detailed for the key of the position, and these must be so posted, on the flanks and in rear, that they can command the foreground without being exposed to the enemy's fire.

If the position is skilfully masked, an enemy's attack may be repulsed with small expenditure of ammunition by the sudden opening of fire from an unexpected direction. Great effect may thus be produced. In an active defence the machine guns are

kept back in the defensive position. This enables troops to be spared for active operations without weakening the defensive line.

As regards attaching machine guns to other troops, the following rules hold good.

Troops, such as advanced and rear guards, which are expected to carry on delaying actions, are always to be provided with machine guns. These will enable them to check the enemy's advance until the main body has time to deploy, or, in the case of rear guards, to retreat. Here it is important to select and occupy quickly the most suitable positions, and to check the advance of the enemy's artillery.

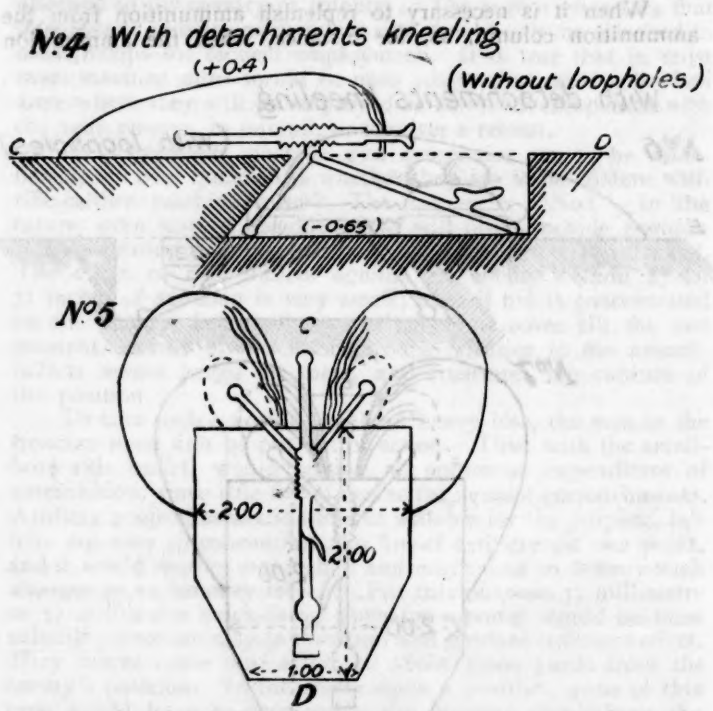


Half of the machine guns will be kept with the main reserve. Machine guns should not be used in the firing line in the attack, though this may be advisable in the defence, especially when the force is driven back by an enemy in overwhelming strength, and proceeds to deploy its main reserve, as at Mukden. When infantry flank guards and flanking parties are not sufficiently strong, machine guns may be attached to them.

Entrenchments for machine guns are frequently necessary, since machine guns offer large targets, especially at distances under 1,100 yards. It will therefore often be necessary to con-

struct entrenchments and screens even under fire. If no time is available for this, sandbags may be piled together.

If it is possible to construct a machine gun pit, it is made with a parapet as for men lying down. When more time is available, a "kneeling" parapet is built; or the former type may be made first, and improved into the latter, which may be constructed with or without an embrasure.



In defensive positions the emplacement is usually prepared in the trench and provided with a loophole and overhead cover. The loophole is made the same as for the infantry, in order not to attract attention to the machine gun.

If the enemy attempts to destroy the machine guns by artillery fire, they must shift their position. For this purpose spare emplacements should be constructed.

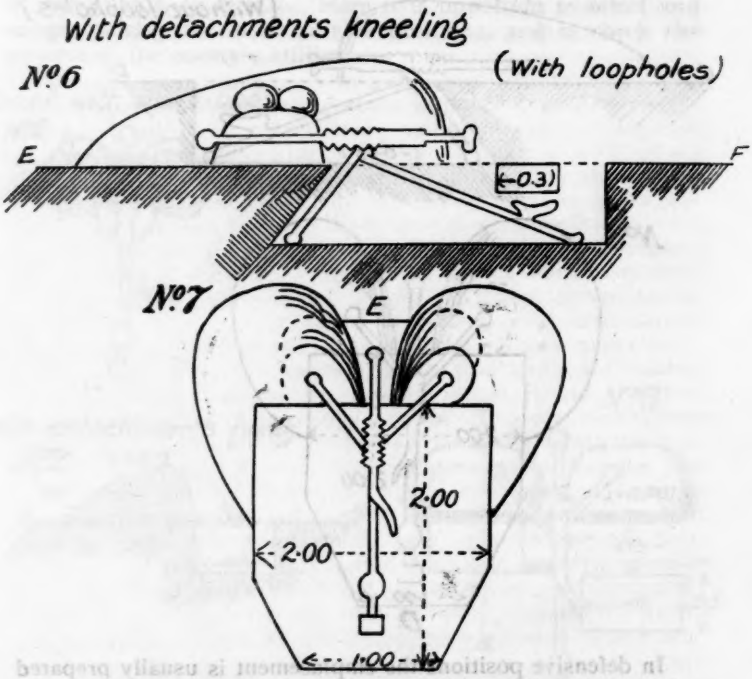
Replenishing Ammunition.

The amount which can be carried with the machine gun does not exceed 5,000 rounds. If necessary, this amount could be fired away at rapid fire in 10 minutes. It is not easy to keep up a supply of ammunition, therefore fire must not be opened

unless a favourable opportunity for effect presents itself. It is necessary to economise ammunition.

The ammunition when brought up is frequently not prepared in belts; this is the case, for instance, when the ammunition is procured from the nearest infantry division. The men must, therefore, be well practised in filling belts with ammunition.

When it is necessary to replenish ammunition from the ammunition column, as, for instance, when the ammunition



wagon is half emptied, the remainder of the ammunition must be unpacked close to the machine gun position. If possible, it must be prepared and carried to the position before the enemy's artillery opens fire, it will be difficult to replenish ammunition afterwards. If this cannot be done from the ammunition column, the commander of the nearest body of infantry must be applied to.

Summary.

The foregoing paragraphs contain only the main principles of the employment of machine guns, based on experience in war. The machine gun is a new and powerful weapon, which, when

properly handled, may produce decisive results. At present it is too complicated, and, to handle it properly, it requires mechanical knowledge which must be acquired in peace time For this purpose it is necessary to form permanent machine gun companies and to train them in peace time.

If such companies are established in peace, it becomes a question whether they should be independent or should be attached to the cavalry or infantry. The author considers that they should remain independent and should only be attached to other troops for tactical employment. It is true that in most cases machine guns would be used singly, but cases will often arise where they will be employed as complete companies with the main reserve, in pursuit, or to cover a retreat.

If independent machine gun companies are to be established, the next question is whether they are to be content with rifle-calibre machine guns? The answer is "No!" In the future, even war in the open field will often include position warfare; strongly entrenched positions will have to be attacked. The effect of rifle bullets against an enemy behind 27 or 31 inches of sandbag is very small; even if fire is concentrated on the enemy, he remains quietly behind cover till the last moment, stands up when our troops advance to the assault, inflicts severe losses on them, and frustrates the capture of the position.

To take such a position without heavy loss, the men in the trenches must first be put out of action. This, with the small-bore rifle bullet, would require an enormous expenditure of ammunition, since rifle fire is ineffective against entrenchments. Artillery projectiles would be most suitable for the purpose, but it is not easy to concentrate the fire of artillery on one point, and it would require many shell and much time to destroy such a target as an infantry trench. For this purpose 37 millimetre or 47 millimetre quick-firing guns (pom-poms) would be most suitable; these are easy to transport and produce sufficient effect. They might come into action at about 1,100 yards from the enemy's position. In the attack upon a position, guns of this type would have to accompany the infantry throughout the attack.

The expression "machine gun companies" (or batteries) will probably come to mean units armed with rifle-calibre machine guns, or with small-bore Q.F. field guns. These weapons will be used both in attack and in defence.

On the Effect Produced by Machine Guns.

A third Japanese officer, after his experience in the war, writes on this subject as follows:—

Within a distance of 1,650 yards the machine gun raises the courage of our own troops and discourages the enemy more than artillery fire does. Artillery fire is interrupted by pauses; it is possible to get to cover after the flash of the gun, before

the effect is manifested, and so to escape from the shell. Anyone who has often been present in battle knows that an artillery shell does comparatively little damage in spite of its noisy explosion. On the other hand, the effect of machine gun fire, especially at close range, produces great effect; this is due to its flat trajectory and great penetration, as well as to the uninterrupted continuity of the fire and the strange noise which it produces. Machine gun fire cripples the advance of the attack, and has such effect even on the defender that he hides behind cover and ceases to be formidable. In such situations machine gun fire raises the spirits of our own troops; fire-direction becomes easy and effective. It is certain that machine gun fire exerts a great influence on the successful issue of the combat. The fire of one machine gun is more effective than that of a large number of infantry; the fire is more accurate, because the machine gun is supported on a tripod; the man aims correctly, because he is safe behind a shield; by a suitable choice of sight and point to lay on, the commander can direct the cone of bullets where he pleases.

As regards range, in order to develop the full effect of the fire of a machine gun this should not usually exceed 1,100 yards. Firing at longer ranges reduces the effect and betrays one's strength and position prematurely to the enemy. In the defence it is advisable to let the enemy approach to within 220 yards, and then to open fire; especially when the defender is in a strong position. Beyond 1,100 yards the machine gun still produces good effect on closed bodies and on artillery on the move. In the battle of Te-li-sso (Wa-fang-kou) good effect was produced upon dense columns of the enemy even at 2,500 yards.

In defensive positions the ranges to certain points must be carefully measured, and sketches giving these ranges issued to each machine gun commander. When a target appears at a distance it is advisable to enquire the range from the artillery, if any is close at hand, and to set the sights accordingly.

Observation of fire is best carried out by watching the rising clouds of dust; but under some conditions of ground surface, weather, and distance, these are not to be seen. Failing this, opinion must be formed from the behaviour of the enemy; for troops under effective machine gun fire, however brave they may be, will show that they are feeling the effects by their movements and changes of formation.

Night firing was frequently carried out in Manchuria. This was owing to various circumstances: such as the winter season, the flat open country, the great distance between inhabited places, and the difficulty of constructing cover, which led to a preference for night attacks. Aiming at night is difficult enough, but still greater difficulty was found in feeding ammunition into the machine guns. It is a good plan to light up the feed gear by a small electric lamp behind the shield. Care must be taken not to let the light shine through the loophole in the shield, and so betray the position to the enemy. But if

the men are thoroughly trained they can manage the ammunition feed quite well by starlight. The sight must be set by day and the machine gun clamped to shoot horizontally.

Economy of ammunition is urgently necessary. However great the effect of machine gun fire may be, it falls off at long ranges, especially because the enemy evades it. Opening fire at long range with a machine gun means the expenditure of a quantity of ammunition, without a corresponding result, before the enemy reaches the zone of effective fire. In the meantime, moreover, the machine gun may be put out of action by a failure of its mechanism. Fire should not be opened, therefore, especially on the defensive, until it is certain that the enemy is near enough for the fire to be effective. Up to this moment the combat must be carried on by the infantry or dismounted cavalry.

At the battle of Hei-kou-tai, for instance, the following derangements only of the mechanism of machine guns occurred: —Cartridge exploded in the feed gear, 1; extractors broken, average 1 per machine gun; jammed cartridges, average 1 per 300 rounds.

The cause of the explosion of a cartridge, which occurred at the fifth round, could not be ascertained. Since the ammunition was excellent, the cause may have been the sudden heating and expansion of the barrel, previously contracted by the cold. To avoid such accidents, the machine guns should be covered with blankets when in position of readiness.

Breakages of extractors are unavoidable; when the locks are well oiled they occur less frequently. Cartridge jams are due to dirt or want of oil, to improper filling of the belts, and to the sliding plate getting bent.

As regards the employment of machine guns, the author is decidedly of opinion that they should never be employed singly. To do so is dangerous, because a machine gun is placed either at the weakest or the most important point of a position, and such a point cannot be rendered safe by placing one machine gun there. Moreover, there is always the danger that the machine gun may be put out of action by some failure of the mechanism, and this would have a serious effect on the general situation.

If the front to be defended is wide, and if few machine guns are available, and the direction of the enemy's attack cannot be predicted, it is better to post the machine guns at a salient or re-entering angle in order that they may command the foreground in front of the whole position. If entrenchments are constructed which do not readily admit of making a salient or re-entering angle, then special advanced works must be built for the machine guns in order to enlarge their field of fire.

THE VON LÖBELL REPORTS ON MILITARY MATTERS IN 1908.

Précis from the German by Lieut.-Colonel E. GUNTER, *p.s.c., late East Lancashire Regiment.*

Continued from January JOURNAL, p. 87.

PART II.

REPORTS ON THE SEPARATE BRANCHES OF MILITARY ART. INFANTRY AND COMBINED TACTICS, 1908.

A.—WAR EXPERIENCE AND QUESTIONS OF GENERAL INTEREST.

NO Army had any war experience worth mentioning in 1908, so criticism based on manœuvres must be restricted.

Years of peace bring about exaggerated ideas regarding technical appliances. These, however, require favourable conditions seldom forthcoming in actual war, though they may be imagined or arranged for in peace manœuvres. In war, events so often dominate the situation that such appliances either work wonders or become mere impedimenta. A highly-developed *moral* is required to utilise fully technical aids. Nothing could be more fatal than to trust to technical appliances only. The dominant factors are the spirit of the General and the soul of the people. The use of the telephone, of swift motors for the conveyance of the Generals and their Staffs from point to point, and of motor traction for the train is necessitated by the increase in the size of modern armies. The three systems of airships: the rigid, the semi-rigid and the flexible, will in future wars fulfil their respective tasks—the great rigid airship carrying out the distant strategical reconnaissance, the flexible, the reconnaissance of the hostile Cavalry screen, and so on. General von Blume, in his paper in Vol. III. of the *Deutsche Offizier Blatt*, No. 43: " . . . Where formerly a General often worked in the dark, he will now often, though not always, have revealed to his eyes as on a chessboard the position of both friend and foe. The advantage of this will lie chiefly with the defensive, for the main advantage the attack has hitherto possessed is the possibility of surprise and the state of uncertainty the defender is thrown into owing to his dependence on the action of his assailant. The equilibrium will not be

restored until aeronautics have so progressed that the attacker may work against passive material defences with annihilating effect from above." The Report gives much space to the views of General von Blume on the Modern Battle, especially as to the use of Reserves: "The influence exercised by Commanders of Forces grows with the increase in the strength of the Reserves," he says. He does not think, as so many do, that supervision and command are so very difficult in these days of great extension of forces, owing, he considers, to the improved means of rapid communication.

German and French Ideas on the Command of Troops.

In Germany we see in most cases the advance of a great army on a broad front, all its strength in the front lines, with the avowed intention to bring about the decision by enveloping the enemy on the field of battle "by a brutal rush," as the French call it. The character of the original deployment is decisive, changes in the arrangements and in the grouping of the troops being impracticable. Reports as to the enemy's movements are therefore of less consequence than the determined accomplishment of the will of the Commander who intends to impose a certain line of action on his opponent. It is on this principle that the Germans rate so highly the proper conduct of the "encounter battle."

In France, on the other hand, the leading idea is to await the reception of reports of the enemy's action before making final arrangements. Consequently, contrary to German procedure, they move on a narrow front with great depth. This is brought about by pushing forward an Army Advanced Guard and leaving in rear an Army Reserve. (*See* Balck's "Tactics," Vol. III., p. 377.) The great Reserves are intended to keep the Army more in hand, and so to neutralise the ill-effects of errors consequent on false intelligence, untoward incidents, and faults of minor leaders. The danger of one's action being subordinated to that of the enemy is obvious. Army Advanced Guards and advanced positions are intended to deceive the enemy, to invite attack on these advanced portions of troops, and so expose the attackers to counter-attack. It is hoped, also, that Army Advanced Guards, preceded by Advanced Cavalry Divisions, will gain better intelligence of the enemy's position and movements, and gain time for the attack of the main force.

In the actual conduct of the fight, the French pay great attention to the ground, the Germans less so. The French hope the opponent will rashly commit faults, and that their own Reserves, always on the watch for such, will then pounce down on them and make them pay dearly for it. There is, however, always a danger of their not coming into action at all or at the wrong place, as happened in the Russo-Japanese War.

The French prepare the attack with Artillery fire to deprive the enemy of his mobility, and then destroy him. Much stress

is laid on co-operation of Infantry and Artillery, but insufficient importance is given to preponderance of Infantry fire. Decision is sought by bringing up masses of skilfully-led Reserves, the assault being, however, chiefly frontal, in view to penetration. In Germany the possibility of this being successful is no longer denied, but flank attack is preferred, and victory looked for in simultaneous mass-fire from guns, rifles, and machine guns at the decisive point, followed by determined attack with the bayonet.

INFANTRY TACTICS IN INDIVIDUAL STATES.

Austria-Hungary.—The *Militär Wochenblatt*, of the 7th of August, 1908, describes the principles of the Infantry Drill of 1903 as being so much in accordance with those of the German Army that there would be no difficulty in "working" Austrian and German Infantry together in a combined corps. A new issue is projected, but it will probably contain few alterations. New regulations for machine guns attached to Infantry were issued (*Streffleur*, Vol. IV., 1908). The Detachment of 2 machine guns is drawn up in line with an interval of 5 paces. In column they are at 3 paces distance, and take up 65 paces in depth. Each machine gun requires 7 mules (or pack horses) (5 for gun and ammunition, 1 for the shield, 1 for small stores) and 1 reserve mule. The Detachment consists of 1 officer, 33 men, 18 horses. They carry 20,000 rounds. The Cavalry Machine Gun Detachment has 4 machine guns and carries 60,000 rounds. Each Section has 2 guns, 1 officer, 23 men, and 32 horses, with transport.

France.—The Reports from Morocco unite in praising the excellent conduct of the French Infantry on service. Even under severe privations it did not fail. The simplicity of their fighting method and their good use of ground stood them in good stead, and, notwithstanding their lively temperament, they kept calm in critical moments. They fired section volleys with effect at 2,000 metres on the hostile groups of horsemen in motion. At the manœuvres their fire-tactics were not satisfactory, but the co-operation of Infantry and Artillery, brought about by constant practice together, was remarkable. The discipline was good as long as the men were kept in good humour. Each Infantry Regiment had 12 mounted scouts, each Rifle Battalion 5 attached and at the disposal of the Commander of the unit.

The weight carried by the men is reduced from about 60 lbs. to 43¾ lbs. The Regiment has, however, 45 instead of 39 carriages. A new universal intrenching tool is being introduced. A Regiment has 4 machine guns. The Transport is in future to be mule or pack pony. Concealment of the positions of these machine guns, so that they may act by surprise, is much practised. In the attack they are to be used

especially to ward off counter-attack, and to sweep the flanks and also defiles.

Germany††.—The Report says that competent observers praised the accomplishments of the German Infantry, as evinced in manœuvres. It was skilful in proportioning the density of its firing-line to the requirements of the moment. The Machine Gun Companies were skilfully handled. They frequently reserved their action till the decisive moment. As Artillery cannot always act at the very moment when their support is urgently required by Infantry, it is important that these should have a proportion of machine guns attached to them; but they are not suitable for a continuous fire-fight, owing to the amount of ammunition required, the time necessitated for refilling the cartridge belts, the liability to jam, etc. They must therefore await favourable opportunities for action. It is considered better, therefore, for various reasons, that the Machine Gun Company should be attached to the Regiment as a 13th Company at the disposal of the Regimental Commander, in preference to the Battalions, as in England. The depth occupied by the two guns under fire, the fewer opportunities for their action, and the greater danger their liability to jam would expose them to if in the front line, are given as reasons. It is remarked that there is a danger at all manœuvres of getting into a *habit of peace tactics—i.e.*, the shortening of all distances, keeping too long in close formations, insufficient use of ground, ineffective co-operation with the Artillery. Desultory partial attacks often result, and the necessity of a great simultaneous attack is overlooked, owing to undue hurry. On the other hand, peace manœuvres should teach where a slow advance is required and where rapid attack is possible owing to Artillery support or to the protective fire of other Infantry. At the Imperial manœuvres in Lorraine the co-operation of Artillery and Infantry, the extension when in the open, and careful occupation of cover when available, as well as the well-timed attack of the 30th and 31st Infantry Divisions were remarkable.

Several proposals for improvement in our regulations have been made. Among others that of forming the "group" of 6 files instead of 4 finds favour (less depth, fewer group leaders in a Company, etc.). These will be discussed and decided on in 1909.

Great Britain†.—The characteristics of the British Battle Practice observed were, as before: unusual caution, wide ex-

††British officers of all ranks should study carefully the *Beiheft*, No. 89 of the *Exerzier* (*Infanterie*) *Reglement* of 29th May, 1906, issued in August, 1907, with critical remarks on the attack systems of the Austrian, British, French, German and Italian Armies. Critical remarks are to be found in the *Militär Wochenblatt*, 3, 18, 44, 45, 51, 108, of 1908.—E. G.

†It is to be remarked that the Report on Great Britain was published before our great manœuvres of Sept., 1909.—E. G.

tension, breadth of frontage and thin firing lines. No rules for the "encounter-battle" are laid down. The attack on a position is, however, fully dealt with. The thorough training of the troops in night operations and the co-operation of Infantry and Artillery are remarkable. The aim of these is concentration of their combined fire-action on important hostile tactical points. In preparing defensive positions, great stress is laid on false trenches in front and on the flanks. Great use is to be made of Cyclists. The Report goes into details of coast defence aided by Cyclists, as prescribed by Cyclist Training, 23rd July, 1908, and draws attention to the fact that 10 Cyclist Territorial Battalions of 8 Companies each are to be formed.

Manœuvres.—Reports are given of the chief manœuvres held in Austria-Hungary, France, Italy, and Russia, which space does not admit of epitomising. Some of these have been translated in the JOURNAL during the past year. Those in Italy in February, p. 255.

CAVALRY TACTICS IN 1908.

GENERAL.

In England the ideas of turning Cavalry into Mounted Infantry have lost ground, and in Russia also, fighting on horseback has assumed greater importance, so that the views held as to the employment of Cavalry by the Chief Powers are similar.

The new German regulations for field service lay more stress than ever on the necessity of putting to rout the enemy's Cavalry. This is not denied. To do it successfully, closed bodies must be kept in reserve, so the action must be carried on by tactical units. For all this, increased progress must be made in dismounted action. The example given in the British "Cavalry Training," 1907, of attack being sometimes carried out on foot, is likely to be followed in the forthcoming new German Cavalry Drill. The latest experience as to Cavalry reconnaissance and scouting is embodied in the German Field Service Regulations. The Russians are embodying their war experience in their new regulations (in preparation).

In France the difficulties of the two years' service are being felt, and at the manœuvres of 1907 their Cavalry, though numerous, played a poor part.

The views held in Austria and Italy are similar to those obtaining in Germany, and now in England Cavalry manœuvres on a large scale are being held for the first time. "English Cavalry Training, 1907," is discussed in the *Cavalerie Monatshefte*, March and December, 1908, and the *Militär Wochenblatt*, Nos. 36, 111, 115, 1908.

It is quite impracticable in this curtailed *précis* to do more than draw attention to the Chief Reports on Cavalry. The part taken by Cavalry in the Austrian, British, French, Italian, and Russian manœuvres is shown more or less in detail, while the Cavalry action in the German *Kaiser* manœuvres and in the special Cavalry manœuvres held in that country in 1908 are very fully gone into. A complete list of books and periodical articles, etc., dealing with these is given at the end of the chapters on Cavalry, p. 334, of the Report.

FIELD ARTILLERY TACTICS IN 1908.

General.

The Regulations for the employment of Artillery, 1908, have embodied certain principles necessitated by the experience of recent wars and by rearmament with modern weapons. In Germany have been issued the new *Felddienstordnung* and the *Fuss-Artillerie Reglement*. In Austria the *Artillery Training* (new issue) has been completed. In France the increase of the Field Artillery has been brought about; and in England a new *Field Artillery Training* has been issued. Among the chief problems to be solved is that of "How to fight shield-protected guns?" In the year under review little has been done towards its solution. It is considered at present that the employment of Heavy Artillery will cut the knot. The French have tried pom-poms without success; so they will not introduce them.

Much has been written about ways and means of finding out invisible targets, and observation of shots directed towards these. All technical methods of improving indirect fire from invisible positions (telephone, signalling, chains of observation posts, messengers, etc.) have been perseveringly practised during the past year.

Increased attention is being paid by Field Artillery to reconnaissance and observation and the choice of positions, etc. In view to co-operation with Infantry, more time is demanded of the latter before they advance to close distance to enable the guns to get ready to support them. As a fact, in war this is brought about by hostile fire hindering the Infantry from rushing forward. In manœuvres this is often precipitated. This is harmful if a change in the Artillery position should be necessary. The gunners are flustered and unable to obtain that degree of observation which is necessary for good fire-effect or to make their arrangements for effective support by carefully noticing the position of their own Infantry, etc. The new word "*Lauerstellung*" (briefly, "watch-pit") and its use is explained.

The difficulty of rapid aim and fire at moving objects has caused a cry to be raised for a quick-action range-finder.† The

†See *Das Beschiessen lenkbarer Luftschiffe*, Lt.-Gen. Von Rohne, *Artilleristische Monatshefte*, June, 1908.

question of effective fire against airships belongs to this category. Guns with fixed spade attachment, and those with anchors like the French, become with the recoil so firmly fixed in the ground that it is difficult during rapid fire to traverse the gun quickly on to lateral objectives. Fire against Cavalry and Infantry of little depth, making flank marches within range, can only be effective if directed beforehand at a visible object towards which the troops are marching. The question of increased ammunition carried with the battery was much discussed in France. At Liao-Yang, at the battles on the Sha-Ho, and at Mukden in the last war some batteries fired 500 rounds. The question of 4 or 6 guns in a battery was again brought forward. It is evident that the 8-gun battery system has been quite given up. Proposals have been made to divide the 6-gun field battery into half batteries of 3 guns each, to get the greatest fire power out of the Q.F. battery.§§

FIELD ARTILLERY IN INDIVIDUAL STATES.

Austria Hungary.—In the reorganisation of the Field Artillery, the Divisional Artillery Regiments are called "Field Gun Regiments"; the Corps Artillery Regiments, "Field Howitzer Regiments"; the Mobile Siege Trains are called "Heavy Howitzer Divisions." The latter are classed as Field Artillery. The Mountain Artillery is organised in 3 regiments. With each regiment there are 4 ammunition columns in order that four times the amount carried by the batteries in their limbers and ammunition wagons may be available altogether. Each column has as many züge (sections) as there are batteries in the regiment.§ Each zug carries three-quarters the quantity of ammunition a battery carries. These 4 ammunition columns, with the 4 Infantry ammunition columns, form the Divisional Ammunition *Park*. As a rule, 1 Infantry ammunition column and 2 Artillery ammunition columns follow the division into battle.

A new "Provisional" Part III. of the "Austrian Artillery Training," with the title "The Field Gun," has been issued. The Report gives a full report of its chief provisions as to formations, supply of ammunition, etc.

France‡.—The French Artillery is to be increased; each Army Corps is to have 30 batteries of 4 guns each. This number of guns in a battery was not settled until after much discussion, General Langlois having favoured (among others) the 6-gun battery. A light howitzer for high-angle fire is much

§§It will be remembered, of course, that this system of half batteries of 3 guns instead of sections obtained formerly in the British Service.—E. G.

§There are generally 3 to 4 Batteries in an Austrian Artillery Regiment.

‡For a brief *résumé* of the programme of the artillery reorganisation see p. 1518, November, 1909, of the JOURNAL.—E. G.

desired. The shields of the field guns are now considered too small for protection of the gunners. Exhaustive trials were carried on last year under General Percin to ascertain the best methods of obtaining thorough co-operation between Infantry and Artillery.

Germany.—Details are given in the Report of the chief points in the new Regulations for the Heavy Artillery of the Field Army, its support of Infantry, etc, ammunition supply, etc.

Great Britain.—Two long, closely-printed pages are devoted to giving in detail our amendments to the "Field Artillery Training" of 1906, 1907-8, so German Artillery officers may be as familiar with our practice as with their own. A *résumé* of Sir Ian Hamilton's Report on the improvement in the Field Artillery of the Southern Command in 1907 is given, in which, however, he criticises the want of co-operation of Infantry and Artillery in the attack.

Russia.—The Commander of the St. Petersburg Military District has found it necessary to warn Artillery Commanders that, though firing from concealed positions is very often necessary, it is not everything, and that coming out in the open for support of the Infantry is also necessary.

(To be continued.)

SAMARKÀND AND FERGHÀNA.

By Colonel C. E. DE LA POER BERESFORD.

THE history of Central Asia is bound up with that of Alexander, Gengis, and Timùr. They all passed by Samarkànd, Timùr made it his capital, and there he lies buried. A special permission is necessary to travel by the Central Asian Railway which leads from Krasnovodsk on the Caspian, *viâ* Merv and Bokhàra, to Samarkànd and Andijàn. A new line of rails from Orenburg to Tashkènt is now open. Permission to travel by it may be necessary. The traveller leaves Moscow, crosses the Volga by its only bridge, near Samàra, and, following the old caravan route, travels comfortably along the line of the Syr Daria valley to Tashként. From his seat he sees the apparently limitless Kizil Kum (Red Sand), across whose horizon lies Khìva, where Bèkovitch perished, to which Burnaby rode. Tashkènt is the capital and *plâce d'armes* of Russian Turkestàn and in its church Kauffman, who won the province, sleeps for ever. The taker of Tashkènt was Tchernàyeff, who carried the place by assault, contrary to orders, in 1868. From Tashkènt to Samarkànd the distance is one hundred and eighty miles, traversed by the train in twelve hours. For many years Russia tried to take—and we endeavoured to prevent her taking—the three Central Asian Khânates of Khìva, Khokànd, and Bokhàra. An extract from Arminius Vambèry's thrilling pages may convince the reader how humanity has gained by the substitution of Russia's rule for that of the savage Khâns and Amìrs. Vambèry, describing the punishment of prisoners by the Khân of Khìva, writes:—"As several were passing on their way to the block where their heads were to fall, I saw eight of the oldest, at a sign from the executioner, lie down on the sand. Binding them hand and feet, he knelt on their chests, and pushing his thumb under the orbit of their eyes, cut away the projecting eyeballs with his knife. After each operation he wiped the blade, wet with blood, on the white beard of the sufferer." The Anglo-Russian Agreement, one of the triumphs of latter diplomacy, has prevented our backing up the rule of such ruffians as these filthy and cruel Khâns.

In spring, Samarkànd stands out from a bower of green leaves. When one enters the narrow streets and crowded bazaars, in which but few Russians appear, the picturesque aspect of the inhabitants makes up for the squalor of their surroundings. The Uzbègs dwell in the cities, the Sarts are agriculturists. These names mean little ethnographically; the peoples so called are of Turko-Mongol origin; they speak Turkì,

a debased Arab-Turkish. The Tajiks are true Irânians. These, though but few in number, are scattered all over Central Asia. Fur-capped Kirghìz—nomads who sell mares' milk—Karakalpàks, Tâtars, Jews, in leather caps, Persians, with languorous eyes, fierce, treacherous Afghàns, Tsigànies or gypsies, and here and there a refugee Pathàn, or a Hindù green tea seller, make up the population. Most of these are Mussulmans, including the Dungans, of Chinese race. All, except the Shìah Persians, are good Sunnis, accepting the first three Khalifs, and hating Ali. Almost all the people who come into market from the country ride; their wallet bags in which they carry back their purchases are often beautifully embroidered. There is a rush of horses through the streets. Horses stand all over the Maidàns. The type is a Turkomàn, with a little Arab or Karabâgh blood. They have fair shoulders, somewhat narrow chests, excellent stout legs, pasterns like razor blades. The head is well carried, the eye full of fire, the tail well set on. These horses vary from 14 to 14·2 hands in height. Many ponies of a rougher type, 13·2 to 14 hands high, are also ridden. The Fauna of Central Asia are varied. In the high Pamir are found the Ovis Pòli, Argàli, Ammon, with magnificent horns. Lower, the Ibex (Capra Siberica), and stag. In the plains are panther, tiger, wild boar, wolf, and fox. The jackal's cry makes night hideous in the outskirts of Samarkànd. The eagle, vulture, kite, and numerous hawks are the *raptores*. Other birds are the pheasant, red partridge, quail, wild goose, and duck, crow, hoopoe, and oriole.

The Rigistàn is the point of interest in Samarkànd. Three of its sides are occupied by Medrèsses or colleges. The south side is not built on. The Tìlâ Kàri, on the north, is named after the gold foil (Tila) that decorates the mosque inside its courtyard. Of the three buildings in the Rigistàn square, the most beautiful is the Medressé built by Ulùgh Bèg, Timùr's grandson, the famous astronomer. In the great gateway or recessed arch's shadow, the white cracks caused by earthquakes are plainly visible. The artificers whom Timùr spared from the massacre at the taking of Damascus, were probably the builders of his Samarkànd. The Shir Dàr (or lion bearing), Medressé opposite to that of Ulùg Bèg, is less disfigured by earthquake shocks, although its minarets have been thrown out of the perpendicular. The two half-effaced Lions with the Sun, above the haunches of its pointed arch, give this Medressé its name. More recent than the others in construction, it is better preserved. It was built in the time of Imam Kuli-Khàn (A.D. 1648). Verestschàgin has immortalised the Shir Dàr in a sun-flooded picture. Its bright coloured tiles reflect the light. Around it are gathered the faithful, summoned to resist the Russian invaders; the heads of Russian prisoners, their yellow hair stained with blood and dust, are impaled on high stakes in front of the building. On its steps a frenzied Mollah, pointing to the trophies of war, urges the crowd to fight to the death. I have often wondered how this

picture had such a success in Russia; it must have drawn bitter tears from the mothers who had pressed those severed heads to their bosoms, away in the Western Steppes, years before. These Medressé façades of Samarkànd have something of the majesty of the old Persian architecture, influenced by Assyrian example. In India the style is seen in the tombs of Tatar rulers, descendants of Timùr at Agra, less noble, but more decorated than these. More debased are the gateway of the Masjid Shah at Ispahàn; the bulbs and pill-boxes of Delhi, also built by Mogul sovereigns. Shah Rûkh (King and Castle, Rook), Timùr's favourite son, named after the move at chess, the only game the lame Emperor cared for, succeeded his father as ruler of Khorassàn, Seïstàn, Isfahàn, and Shiràz. His son was Ulùg Bèg. He ruled as his father's viceroy in Transoxiana, at Samarkànd, and succeeded Shah Rûkh as Emperor at Heràt, but was himself put to death in prison by a Persian slave by orders of his own son, Abd-ul-Latif. The parricide was killed in his turn by one of Ulùg Bèg's trusted servants in A.D. 1450.

The monuments more directly connected with Timùr Leng, are the grandest of the ruins of Samarkànd. First, the Bibikhânum, which stands on the eminence to the north-west of the Rigistàn. It was erected to the memory of Timùr's favourite wife, a princess of the Yuen dynasty of China, by her adoring widower. Skrine thus describes this monument:—"The actual tomb is a mass of shapeless ruins. . . . The approach lies through a gateway which scarcely retains a trace of the original design. . . . The front exhibits a recessed portal, sixty feet wide, and higher than that of Peterborough Cathedral, and an octagonal minaret at either extremity. Between them rises a stupendous dome, with a double frieze of blue, green, and yellow enamel, on which texts from the Koràn gleam brightly in gold lettering. The interior is a square of fifty feet, adorned with arabesques." Through the dome, rent by the earthquake of 1897, are seen the sky and an inner and outer shell with a staircase between. Schuyler says the Russians allowed the Bibikhânum to be used as a market and stable. In any case, it is now a ruin, not better preserved than the baths of Constantine, at Rome, which latter is the only building that in any way resembles this masterpiece of modern Persian art. The tomb of Shah Zindah, "the living saint," was also erected by Timùr. It stands amidst a village of ruined tombs. Its interesting gateway gives a glimpse of the banner of the saint. To the left of the entrance is a chamber used as a mosque. All the doorways are enriched with decorations of beautiful tiles, which are probably Persian imitations of the work introduced into Central Asia by the Mongols. Kazim Ibn Abbas was killed by the fire worshippers of Samarkànd for endeavouring to convert them to the belief of Islam. Of all the monuments in the city the most famous, though not by any means the finest, is the Gùr Amìr, or grave of Timùr, whose first ambition was "the conquest and monarchy of the world. To live in the

memory and esteem of future ages was the second wish of his magnanimous spirit. Demir or Timùr signifies, in the Turkish language, iron, and Bèg is the appellation of a lord or prince. By the change of a letter or an accent, it is changed into Leng or Lame; and a European corruption confounds the two words in the name of Tamerlane." So says Gibbon, in his 65th chapter of the "Decline and Fall." The fluted dome and minarets of the Gûr Amìr are blue, and bright with the famous tiles. The interior is profoundly simple and impressive. Under the dome is a block of dark green jade or nephrite, the largest monolith of its kind in the world, 6 feet 4¼ inches long. Close to it are two stones of marble: one placed to the memory of Ulùgh Bèg, the other to that of Mir Sayìd Baraka, Timùr's tutor, for whom he built this resting place, A.D. 1386. Over all, dependent from a staff, inclined towards Mecca, is a white horse-hair plume—the emblem of a faith propagated by the sword. In the solemn silence of the place, one almost seems to feel the presence of the Great Amìr. Yet not in the block of jade, but underneath, in a vault of brickwork, to which one descends by a staircase in a recess, lie the bones of Timùr. Less creditable to the memory of the Conqueror of Asia than his statesmanship or victories, is the story that pyramids of human heads were the mile-stones of his progress, and that the price of his Empire was over a million lives.

The *gûta* of Samarkànd, the Sogdiana of the ancients, is counted with the *gûta* or country, of Damascus, of Bavan in Fàrs, and that of the Canal of Obollah at Bàsra, as the four Motannozah or places of delight of the Moslem world. Gibbon tells us (Chapter 65) that Timùr, on the throne of Samarkànd, "displayed in a short repose his magnificence and power . . . . gave audience to the ambassadors of Egypt, Arabia, India, Tartary, Russia, and Spain. . . . The marriage of six of the Emperor's grandsons was esteemed an act of religion as well as of paternal tenderness, and the pomp of the ancient Caliphs was revived in their nuptials. They were celebrated in the gardens of Canighul, decorated with innumerable tents and pavilions, which displayed the luxury of a great city and the spoils of a victorious camp . . . thousands of guests were courteously invited; the orders of state, and the nations of the earth were marshalled at the royal banquet; nor were the ambassadors of Europe . . . excluded from the feast, since even the *Casses*, the smallest of the fish, find their place in the ocean." Looking on the Samarkànd of to-day, in which useful Russian barracks and hospitals display necessary but hideous elevations, one is reminded of Camoen's verses in the grotto of his garden at Macao:—

"*Veremos*
"*Morrer nos Hospitaes, em Pobres Lettos,*
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"*Os que ao rei, e á lei servam de Muro.*"

Ferghàna, or Fargàna, lies to the north-east of and adjoins Samarkànd. I wrote in *The Times* of 8th January, 1903:—

"The Khanate of Khokand, which retained its independence after its neighbours Bokhara and Khîva had surrendered to Russia, was ruled in 1875 by one Khuda-yar, a Khan who managed to keep his subjects constantly in rebellion. It was in this year that Russia, tired of her fractious neighbour's constant warfare, sent General Kauffmann to invade their territory. The great fight took place at Makhram, on the banks of the Sir-Daria, where the Khokandis were utterly routed; Marghilan, the second city of the province, fell without a blow, and Andijan and Namangan, where a feeble resistance was offered, shared the sacred city's fate. In March, 1876, Khokand was incorporated in the dominions of the Emperor Alexander II., under its ancient name of Ferghana, or Fargâna. The province is a high tableland, shut in by lofty mountains and watered by the Sir-Daria (Jaxartes) and its affluents. It is not unlike Kashmir. It may be that my description is too enthusiastic, but when I made my first visit to it, some three years ago, after crossing the sandy deserts of Khîva and Bokhara, this land of streams, running brightly over pebbles, between fields of grass and cotton, on which looked down the snowy giants of Kashgar and Alaï, seemed to me a paradise. And when I continued my way through its pleasant vales to Osh, almost under the shadow of Mount Kauffmann, the impression was, if possible, heightened. Perhaps not two dozen Englishmen have visited Osh in the last two dozen years. These will forgive my metaphor in alluding to it as under Kauffmann's mighty shadow, knowing as they do that the high pass of Tal-dik and the Kizil-sû stream must be passed before the monster mountain comes well in view. But in Ferghâna people talk of Mount Kauffmann just as the natives do of Nânga-Pârbat in Kashmîr. It was at Andijan that there took place in the spring of 1898 the only rising against Russian rule since the definite conquest of the Khanates. This rising had been extensively arranged with a view to simultaneous attacks of various garrisons in Ferghâna. Luckily the attack here was precipitated by the hot-headed Ishân, Mohamed Ali, and the whole thing was so promptly suppressed as to make the inhabitants understand the strength of their new masters. The local camp in which the troops in summer reside is composed of a few buildings, open at the sides, and closed only at the ends. Under these open sheds the Russian soldiers live and sleep. The camp is situated to the west of the Russian town in a wood of poplar trees, and about half a mile from the so-called citadel, where are kept, in a walled enclosure, the arms and ammunition. A little native village of mud huts, now demolished, then lay almost between the camp and citadel. From this the Ishân and his followers rushed the Russian camp when the men were in the heavy sleep of the early morning. A dagger plunged in the sentry's breast prevented an alarm being given, and in a moment the Andijanis were beating the sleeping Russians to death with heavy clubs of wood with which they had provided themselves. The officer on duty soon collected the unwounded together, and with their

bayonets they kept the natives off, whilst a messenger was sent up to the citadel for ammunition. This the quartermaster, good red-tape-bound soul, refused at first to issue without a signed and written requisition, but the sound of firearms, as the Andijanis at the first streaks of light fired upon the Russians, convinced him that all rules may be broken. As soon as the cartridges arrived the Russian soldiers assumed the offensive and drove off their assailants, taking the Ishân and others prisoners. A camp without ammunition, undefended by parapet or stockade, recalls the confidence in the natives displayed by us in India in 1857. Fortunately for Russia, the results were only a local affray, for the prompt banishment of all the offenders struck terror into the hearts of other would-be insurgents against the rule of Russia."

The other towns of Ferghàna are Margelàn, Namangàn, Khòdjend, and Khôkànd. At the latter it was my fate to witness the reception of a native deputation by the Russian Governor. Seldom have I seen a more cut-throat-looking crew. The Naryn river, rising near the Ak-Bel, passes not far from the giant Shan-Tèngri, in the Tian-Shan range, flows under the name of Naryn until its junction with the Kara Dària, when it takes the name of Syr Dària, the ancient Jaxartes. Tian-Shan is, so to speak, the North Downs, and Himalaya the South Downs of Central Asia. The counterforts of Tian-Shan (the Heavenly Mountains) are Alaï, the Turkestàn chain, and Sarik-kol, which last includes the group of Mustagh-Ata (Father of Mountains), covering a superficies of 70,000 kilomètres, and containing huge glaciers, 23,500 feet above sea level. Ferghàna includes the Pamîr, and is divided by the Wachân Valley from our possessions in India. When I was at Osh I thought of trying to get to Yasin and Mastuj, by the Bàr-Ghil pass. Ponies, of which I should have needed at least two dozen, were offered to me at Osh for 30 roubles (say 65 shillings each). The expense rather than the difficulty of the journey deterred me, although I should have received every assistance from the Russian authorities. At Pamîr Post the officers would have put me up, rested my ponies, and given me guides into Wachân. Whether our own Government would have been as kind is doubtful.

Ferghàna, like Bokhara, is often plagued by earthquakes. In 1902 Andijàn suffered severely. It was then a prosperous city of 40,000 inhabitants, who traded in cotton, silk, fruits, carpets, felts, etc. The cotton was piled up in huge masses in the streets awaiting transport to Russia from the neat railway station. The Russian town was prettily planted, with its church, club, barracks, etc. A broad poplar avenue, down which, escorted by Cossacks, galloping in front, rear, and abreast of my carriage, I drove to the native town. The market was full of sheep, long-horned goats, camels, etc. The bazaar was covered in like those of Tashként, Bokhàra, and far Kashgàr. The earthquake swept nearly all this away, leaving but a mass of ruins in its place, around which, in tents pitched by the

Russian soldiers, the hapless Andijànis took their quarters. The station was destroyed. Successive shocks during 16th and 17th December, terrified the inhabitants. Two thousand of them were killed by the falling buildings, and some hundreds more were wounded. General Ivànoff, the Governor of Turkestàn, went at once to Andijàn and superintended the relief works. When he first arrived it was impossible to descend at the town from the train, as several miles of the railway line between it and Fetchenko had been torn up. The first relief for the sufferers arrived in the high wheeled, creaking, native *arbas*. The hub of the wheels of these are some 4 feet above the ground, and the total diameter of the wheels is nearly 8 feet, so that deepish watercourses can be crossed without wetting the goods in the carts. Andijàn has been rebuilt on its old lines. Like many cities of the Punjàb and Central Asia, it has risen again on its own *débris*. The carpets woven there are as magnificent as ever. They somewhat resemble Turkey carpets in the colours of their blues and reds, rendered by the use of natural dyes. The Russians forbid the employment of aniline dyes in all Government shops. The beautiful tints obtained by the use of indigo, madder, ochre, and vegetable greens are altogether different to the crudities introduced by chemists. Of all carpets in Asia (putting Persia aside), those woven by the Tekké Turkomàns are the finest. Then come those of Bokhàra and Ferghàna. As you approach China, the key pattern and rectangular ornamentation replace the waves of Persian origin. The Kashgàr rugs are marvels of pale blue texture. I saw a carpet woven at Andijàn in the Governor-General's ball-room at Tashkènt. It was of the thickest pile, dark indigo blue, with a central ornament and border of madder red. It was of extraordinary size, some 40 by 60 feet, and had been woven on a loom made for the purpose. The only other Central Asian carpet I have seen of such size is that in the dining-room of the small Palace at Tzarskoe-Selo, which is of the rose or *gûl* pattern, of the Akhàl Tekké Turkomàns.

NAVAL NOTES.

Home. The following are the principal appointments which have been made:—Captains—C. F. Thursby to command of R. N. Barracks, Chatham, as Commodore, 2nd Class; N. Grant to "Leander"; C. H. Hughes-Onslow to "Grafton"; J. B. Eustace to "Vanguard"; E. P. Grant to "Arrogant"; W. R. Hall to "Natal"; A. W. Heneage, M.V.O., to "Andromache"; C. E. Hunter to "Roxburgh"; L. E. Power, M.V.O., to "Monmouth"; Hon. H. E. A'Court to "Sapphire" and command of Devonport Destroyer Flotilla; E. S. Alexander-Sinclair, M.V.O., to "Bellona" and in command of 2nd Destroyer Flotilla; J. S. Luard to "Albemarle"; D. R. Nicholson to "Lord Nelson"; G. R. Gaunt to "Challenger" A. E. Chatfield to "London"; H. H. Bruce to "Prince George"; P. Streatfield, M.V.O., to "Crescent." Commanders—A. Lowndes to "Alacrity"; F. C. Brown to "Thetis."

Admiral-of-the-Fleet Lord Fisher of Kilverstone, G.C.B., O.M., G.C.V.O., retired from his post of First Sea Lord on the 25th ult., on which day his successor, Admiral-of-the-Fleet Sir A. K. Wilson, V.C., G.C.B., G.C.V.O., assumed his duties. The only other change in the composition of the Board is that Captain C. E. Madden, C.V.O., has succeeded Vice-Admiral Sir A. L. Winsloe as Junior Sea Lord.

Captain E. C. T. Troubridge, C.M.G., M.V.O., has been appointed Private Secretary to the First Lord of the Admiralty, in which appointment he has succeeded Captain Madden.

Vice-Admiral Sir A. L. Winsloe, K.C.B., C.V.O., C.M.G., hoisted his flag on board the first-class armoured cruiser *Minotaur* on the 25th ult., at Portsmouth, and sailed for China on the 1st inst.

The first-class battleship *Ocean* arrived at Plymouth on the 15th ult. from the Mediterranean, and has since paid off at Devonport.

Steam Trials.—The battleship *Vanguard*, after successfully passing through all her trials, has now been completed for sea and is to be commissioned on the 1st prox. for service in the 1st Division of the Home Fleet.

During her trials thoroughly satisfactory results were obtained, and in some respects the highest efficiency so far attained with turbine machinery in battleships was shown. On the eight hours' full-power trial the power was easily reached with

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the machinery running at about 330 revolutions a minute. Several runs were made over the measured course at Polperro to determine the speed of the ship, which was then loaded slightly in excess of the designed draught and displacement with water and other ballast. The mean power attained was within a small fraction of 22 knots, or one mile an hour more than the designed speed. The economy effected by the machinery was exceptionally high. The coal consumption per shaft horse-power was about 1·6 lbs. an hour. On the 30 hours' trial at what is regarded as the continuous cruising speed the results were equally satisfactory. Again the vessel was loaded with ballast to exceed the designed displacement, but on the measured course she steamed at 19¼ knots while the machinery showed by torsionmeter that 17,600-H.P. was being transmitted by the shafts. On this trial all the auxiliary machines were at work, and the evaporators were used to make up even more water than was unavoidably lost, so that the coal consumption represented the *maximum* necessary on service conditions, and yet the rate of consumption was only 1·7 lbs. per shaft horse-power per hour. The performance of the ship under sea-going conditions was found to be very favourable. A trial was also made at one-fifth the total power, when the speed reached was 13¼ knots.

In the steam tests the practice was adopted of using the steam exhaust from the auxiliary engines for augmenting the steam supplied to the low-pressure turbine or for use in the evaporators. This use of the exhaust steam was dealt with in the presidential address of the Engineer-in-Chief of the Fleet, Admiral Oram, at the recent meeting of the Junior Institution of Engineers, and the results of these special trials of the *Vanguard* showed that by such use of the auxiliary exhaust in the low-pressure turbine the steam consumption was reduced by more than 20 per cent. at low power.

The *Vanguard* also carried out her gun trials. Like all of our recent *Dreadnought* battleships, she is fitted with a main armament of 10 guns of 12-inch calibre and 20 guns of 4-inch calibre. The firing of these guns proved also the satisfactory character of the work done in the manufacture of gun-mounting machinery at the Vickers works. The opportunity was also taken of testing the facility of the turbine machinery for the quick manœuvring of the ship, while many of the auxiliary engines were subjected to the usual contract tests.

The new third-class cruiser *Bellona* has completed her steam trials successfully and maintained an average speed of 22 knots for 12 hours without the engines being forced.—*Times.*

General.—*War Strength of the Sea Powers.*—The Office of Naval Intelligence of the United States, in response to the inquiries of societies and persons interested in naval matters and the relative strength and importance of the sea Powers, has compiled and issued some tables of statistics on the subject. Of these the two more important appear to be those which give the warship tonnage of the Powers in relative order and the relative strength of the *personnel*. We reproduce these tables from the official documents:—

General.

RELATIVE ORDER OF WARSHIP TONNAGE.

At Present.		As would be the case were vessels building now completed.	
Nation.	Tonnage.	Nation.	Tonnage.
Great Britain	1,758,350	Great Britain	2,005,873
United States	682,785	Germany	820,692
Germany	609,700	United States	785,687
France	602,920	France	766,906
Japan	396,368	Japan	489,704
Russia	259,263	Russia	412,250
Italy	216,038	Italy	257,818
Austria	114,897	Austria	167,297

PERSONNEL.

Rank.	England.	France.	Germany.	Japan.	United States.
Admirals of the Fleet ...	6	—	—	1	*
Admirals	13	—	5	5	—
Vice-Admirals	22	15	11	21	—
Rear-Admirals	55	30	20	41	27*d*
Captains and Commanders	625	338	274	273	212*d*
Other line officers	2,326	1,368	1,425	1,436	934*d*
Midshipmen at Sea ...	408	147	208	193	313
Engineer Officers	987	576	363	534	—
Medical Officers	513	385*b*	260	327*b*	296
Pay Officers	585	193	207	294	201
Chaplains	129	—	—	—	22
Warrant Officers	2,105	1,810*c*	2,308	1,404	606
Enlisted Men	99,300	49,312	47,467	41,906	43,490
Marine Officers	457	—	104	—	334
Enlisted men (Marines) ...	20,991*a*	—	1,415	—	9,112
Total	128,522	54,174	54,067	46,485	55,548

* The Admiral of the Navy. *a* Includes 3,267 men of Coast-guard. *b* Includes pharmacists and apothecaries. *c* Includes adjutants, maitres, and premier maitres of all branches. *d* The United States has now, temporarily, as extra numbers, due to promotion for war service, 9 flag officers, 10 captains, 9 commanders, 11 lieutenant-commanders, and 4 lieutenants.

Austria-Hungary.

The Submersibles U3 and U4.—The submersibles U3 and U4, built by the Germania Shipbuilding Yard, Kiel, for the Austro-Hungarian navy, and which arrived at Pola in January and April of last year, respectively, have satisfactorily undergone extensive trials. The good sea-going qualities which they showed already on their passage when towed without suffering any severe damage were again illustrated during their sea trials in a wind of strength six. In the *Marine-Rundschau* of October it is stated that they were steadier than torpedo-boats, and that their propellers

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did not come out of the water. They attained the contract speed of 12 knots at the surface, and the submerged speed of 8·5 knots was considerably exceeded. Rendering the boats ready for submersion took six minutes from the surface condition and thirty seconds from awash. This means less time than stipulated. During the twelve hours' habitability trial the general health of the crew was good. Torpedo practice, too, gave good results, and even after firing two successive shots the boats could easily be kept at the same depth.

A proof of the confidence in the efficiency and the capability of the 300 horsepower kerosene motors was shown in letting one motor run at full speed during the nine knots' trial for twelve hours, instead of running them both at half speed, though otherwise the efforts demanded of the motors would have been less, especially if the required speed had been kept to, instead of running them at more than ten knots during the whole trial. The vessels were towed to Pola, as already mentioned. A reduced crew was on board in order to keep the boats in hand in case the hawsers broke, and also to see to the accumulators and motors.—*Army and Navy Journal.*

Launch.—The torpedo scout *Admiral Spaun*, the first Austrian vessel to be fitted with Parsons turbines, was launched on 30th October. The stipulated speed is 26 knots, with the engines developing 20,000-I.H.P. Her dimensions are as follows:—Length 410 feet, beam 46 feet, draught 15 feet, approximate displacement 3,540 tons; while the armament is to consist of seven 3·9-inch guns and two 1·45-inch machine guns, with three submerged torpedo tubes. Protection is afforded by a 2·4-inch belt at water-line, and an upper belt of 2 inches of hard steel, with an ·8-inch protective deck. A sister ship is included in this year's programme of naval construction. The first of a new series of torpedo boats which are being built at Trieste for the Austrian Navy maintained an average speed of 28·08 knots during a three-hour trial run.

France. The following are the principal promotions and appointments:—

Rear-Admirals—I. M. T. Mallet to command of the Algerian Naval Division. Capitaine de Vaisseau—E. M. Amelot to Rear-Admiral. Capitaines de Frégate—M. F. Grasset, L. A. Viard, P. A. F. Kérihuel to Capitaines de Vaisseau; I. C. Le Gouz de Saint-Seine to command of 1st Mediterranean Submarine Flotilla; G. A. Eng to "Cognée" and command of 1st Destroyer Flotilla of 1st Squadron.—*Journal Officiel de la République Française.*

The Scrapping Policy.—The small cruiser *Galilée* has been struck off the list of the fleet and advertised for sale. The *Temps* has an article on the subject, questioning the wisdom of giving the Minister of Marine the power to strike off any vessel he may consider unserviceable on his own initiative. The number of vessels condemned in 1907-8 is considered not less than 81, divided as follows: 7 battleships, 3 coast-

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defence battleships, 1 armoured gunboat, 1 armoured cruiser, 7 protected cruisers, 9 avisos or destroyers, 3 gunboats, 47 torpedo boats of all classes, and 1 submarine. The total tonnage of the above reaches the large figure of 136,791 tons, or 30,000 more than the tonnage of the 6 *Dantons*, and the cost was, in round numbers, 259 million francs (£10,360,000), or more than twice the greatest amount ever voted for new constructions. The question is, supposing the numbers of a fleet to be established by law, should a Minister of Marine have the power to strike one of these off the list without having assured her being replaced? The rule in private firms is, never to scrap any machinery without substitution. M. de Lanessan has stated in the Senate: "It is uncontestable that later on you will have to replace ship by ship those battleships which have become too old and are no longer capable of meeting the enemy." The words are clear and precise. Certainly, says the *Temps*, we cannot keep on the Navy List vessels that are no longer fit to take their place in action; but it is none the less certain that every ship forms a part of the Navy, and if removed and not replaced, the constitution of the fleet is weakened and altered. For this reason no one should have the power to declare a vessel obsolete unless with the sanction of Parliament, and if a law is necessary to increase the fleet, it is certainly necessary also to reduce it. Having assumed the charge of a fleet of a certain strength, the Minister should not be able to reduce its constitution without higher sanction.

Trials of the "Archimède." — The *Archimède*, submersible, has been going through her trials at Cherbourg, realising a speed of 15¼ knots, instead of an estimated 15. Her chief quality is her large radius of action, which would allow of her steaming from Cherbourg to Toulon or Bizerta without coaling. Her dimensions are considerable compared with her predecessors. Her displacement is 577 tons on the surface and 810 tons when submerged. She was commenced in 1906 with two other submarines, the *Amiral-Bourgois* and the *Mariotte*, at the request of Admiral Fournier, who wished to introduce a class of submarines capable of making long cruises; but the *Archimède* is the largest of the three. Corresponding to her enlarged radius of action, the accommodation of the crew has been much improved: there is a mess-room for the officers, and each has a separate cabin, and comfortable bunks are provided for the men. There is also an electrical cooking installation. Her trials will help to solve the question whether a submarine can be attached to a cruising squadron.

Grounding of the "Ernest Rénan." — The new first-class armoured cruiser *Ernest Rénan*, one of the light division of the 1st Squadron, under the command of Rear-Admiral Pivet, took the ground in the lake of Bizerta when getting under way to proceed to the arsenal at Sidi-Abdalla. Steps were taken to lighten her as far as possible, and after remaining in a rather precarious position for five days she was got off without serious damage on 29th January. An enquiry has been ordered, pending which the Minister of Marine has suspended her captain.

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The "Iéna."—The damaged battleship *Iéna*, which has been used experimentally as a target by the ships of the Mediterranean Squadron, with a view to estimating the effects of modern shell fire on the different parts of a battleship, has capsized and sunk at her moorings off Talins d'Hyères, and is lying on her starboard side in five fathoms of water. A tug was standing by her at the time waiting for the weather to moderate to tow her to Toulon. The accident was due to the heavy sea running and her damaged condition. No definite conclusion has been come to whether it will be possible or wise to raise her. It is said, however, that the cost would be more than she is worth, and also that the operation would be a very dangerous one for the divers.—*Le Temps.*

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Trials of the "North Dakota."—In view of the fact that the first two ships of the so-called *Dreadnought* type to be built for the United States Navy are identical in everything except motive power, the *Delaware* being driven by reciprocating engines and the *North Dakota* by Curtis turbines, an unusual amount of interest has been aroused by the recent speed trials of these two ships.

The *Delaware*, which was built by the Newport News Shipbuilding Company, was tried out over the course off Rockland, Maine. She has reciprocating engines, is equipped with Babcock and Wilcox boilers, and in the five trial runs for standardisation of her propellers, which were made over the mile course, she developed a maximum speed for one mile of 21·98 knots, a mean speed for the five runs of 21·44 knots; a maximum horse-power of 30,000, and a mean horse-power of 28,578.

The *North Dakota* is not only an exact duplicate of the *Delaware* in the form of her hull and in the displacement, but in common with that ship is equipped with fourteen Babcock and Wilcox boilers, but instead of reciprocating, she is fitted with turbine engines. Consequently, the Navy Department was in a position to make a most exact comparison of the efficiency of the respective motive power, all the conditions except that of the motors being identical. The five trials of the *North Dakota* over the mile course gave the following speeds: 22·25, 21·48, 22·13, 21·51, and 23·13, the average speed working out at 21·83 knots. She thus not only exceeded the mean speed of the *Delaware* by 0·39 knots, but the turbines exceeded the reciprocating engines by over 5,000 horse-power. The maximum number of revolutions of her propellers was 286 a minute, and it was found that 263 revolutions were sufficient to maintain the contract speed of 21 knots.

In the four-hour test under full power the *North Dakota* made 21·71 knots for the first two hours, and 21·64 knots in the third hour. On the fourth mile the failure of a tube in one of the boilers necessitated the shutting down of four out of the fourteen boilers; but even under this greatly reduced power, the speed of the ship was exactly 21 knots.

A feature which, from the military standpoint, is of the greatest importance is the remarkable steadiness of the ship, even when the turbines are being pushed to the limit. Throughout the greater part of the length of the ship it was scarcely possible to tell, from any vibration, that the

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engines were in motion. This is a feature which is particularly appreciated by ordnance officers; since the vibration which is noticeable on ships driven by reciprocating engines is more or less disturbing to the gun sights. The *North Dakota*, which is considerably the largest warship yet built for our Navy, has been constructed in record time; and the Fore River Company is to be congratulated on the fact that, had it not been for delays in the furnishing of armour, they would have cut down the record for construction even more than they have. Her dimensions are:—Total length, 518 feet 9 inches; beam, 85 feet 2½ inches; draught on trial, 27 feet; displacement on trial, 20,000 tons. She is the most completely armoured ship afloat. Her main belt, 7 feet 6 inches wide, tapers from 10 inches at its bottom edge to 12 inches at its top edge. Above this, extending to the gun deck, is a second belt 8 feet wide, tapering from 10 inches at its bottom edge to 8 inches at the top. The 5-inch guns have a protection of 5 inches of armour, and the main turrets and barbettes are protected by 11 inches.

The lines of the ship are particularly fine, in fact, as fine as those of our armoured cruisers. She will prove to be a splendid vessel when heading into a heavy sea; for not only has she freeboard, due to her forecastle deck, of 27 feet, but she is given a very pronounced outward flare, which should serve to lift her comfortably over the waves, and enable the ship to be driven at full speed in heavy weather. An innovation is the placing of the officers' quarters forward under the forecastle deck and in the superstructure immediately abaft of the two forward turrets.

The battery is mounted on the longitudinal axis of the ship, a disposition which originated with our Construction Department, and is being followed by some foreign navies. The placing of all the guns on the centre line enables the whole battery to be trained on either beam, giving the ship a broadside discharge either to port or starboard of ten 12-inch guns. This arrangement, it is true, weakens the end-on fire, which, in these ships, consists of only four guns, as against six guns in several foreign navies; but it is the belief of our naval officers that future engagements will be fought almost entirely broadside to broadside. Personally, we are inclined to the belief that if the third and fourth turrets were staggered, the third being moved over to starboard and the fourth turret to port, the effectiveness of the gunfire would be increased without diminishing the broadside fire. The foremost pair of guns have a command of 33 feet. The pair immediately astern have a command of 41 feet. Turret No. 3 carries its guns about 32 feet above the sea, and those in the two after turrets have a command of about 25 feet.

Aside from the fact that she attained a full-power speed of 21·64 knots against the contract requirement of 21 knots, the most satisfactory feature is the remarkably low coal consumption of the ship, particularly at low speed—for one of the most serious charges formerly made against the turbine was that of its extravagance in coal consumption under low-speed conditions. The coal per horse-power per hour for the total horse-power worked out at 1·68 pounds at full speed; at 19 knots speed it was 1·58 pounds; and at 12 knots it was 2·34 pounds. The coal per horse-power per hour of an equivalent indicated horse-power (the power was taken by torsionmeter from the propeller shaft) works out for the three speeds,

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respectively, at 1·55, 1·46, and 2·15 pounds per horse-power per hour. With the ship at her maximum displacement, the steaming radius of the *North Dakota* would therefore be 3,000 knots at 21½ knots, 4,600 knots at 19 knots, and 9,000 knots at 12 knots speed. Compared with the reciprocating-engine-driven *Delaware*, the turbine-driven *North Dakota* required only 295 as against 315 tons of coal per twenty-four hours on the 19-knot trial, and 105 as against 111 tons on the 12-knot trial.

Official Trials of the "North Dakota."

	3-hours of full power trial.	24-hour trial at 19 knots.	24-hour trial at 12 knots.
Actual Average Speed...	21·64	19·24	12·05
Revolutions per minute	280·4	231·9	143·2
Shaft H.P. of main turbines	31,400	16,710	3,800
I.H.P. of engineer's auxiliaries	1,100	660	400
Water rate of main turbines only	13·6	14·2	20·5
„ „ for all engineer's purposes based on total H.P....	13·96	15·29	22·3
Coal used, pounds per hour	54,400	27·550	9,820
„ „ tons per 24 hours	583	295·3	105
Coal per hour per shaft H.P. of Turbines ...	1·74	1·65	2·58
„ „ „ for total H.P. ...	1·68	1·58	2·34
„ „ „ of equiv. I.H.P.* ...	1·55	1·46	2·15

* Based on 8 per cent. friction for reciprocating engine.

	Specified in Contract.	Actual.	Saving Per cent.
3-hours of full-power trial	15·1	13·96	7·5
24-hour 19-knot trial	16·1	15·29	5·0
24-hour 12-knot trial	23·2	22·3	3·9

The *North Dakota* is driven by two Curtis turbines, the pitch diameter of whose moving buckets is 144 inches. There are nine stages for going ahead and two for going astern. The shaft diameter is 30 inches, and the bearings at each end of the turbine are 21 inches in diameter by 42 inches long. The steam, superheated fifty degrees, enters the steam chest at a pressure of 280 pounds absolute. Here it passes through twenty nozzles, where it is expanded and acquires a velocity of 2,000 feet per second, its pressure falling to 75 pounds absolute. It then passes through another set of nozzles between the first and second stage, where it acquires a velocity of 1,070 feet per second, leaving the blades with a velocity of 155 feet per second. The pressure in the second stage is 49·4 pounds absolute. From the second to the eighth stage the entrance velocity of the steam remains at 1,070 feet per second, and the exit velocity at 155 feet per second. The pressure, however, drops from 75 pounds in the first stage to one pound absolute in the ninth stage, at which pressure it passes to the condenser, where a vacuum of 28½ inches is maintained. It can thus be seen that as the steam traverses the successive stages, there is a continual drop in pressure, the energy of the steam being delivered to the moving blades in the form of impact, the velocity of which is developed by expanding the steam in series of nozzles forming the entrance to each stage. The number of nozzles increases from 20 in the first stage to 360 at the sixth stage. The buckets in the first stage are

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1¼ inches in length, and they increase to a length of 12 inches in the last stage.

In the two stages of the reverse turbine, it has proved possible to develop about 60 per cent. of the power that can be developed on the go-ahead turbines, and thus the objection which has been raised against the turbine that it provides insufficient manœuvring power may be considered to be pretty well met. In this connection it may be mentioned that in the trials of the Japanese cruiser *Ibuki*, which is equipped with turbines of this type, when the ship was steaming at 20 knots, it was possible in reversing to stop the starboard turbine in 32 seconds, the port turbine in 25 seconds, and bring the vessel to absolute rest in two minutes.

The following tables show the *Comparative Performance of the "North Dakota" and "Delaware."*—

	North Dakota.	*Delaware.*
Fastest run over measured mile	22·25	21·98
Average of five high runs	21·83	21·44
Full power trial speed	21·64	21·56
,, ,, ,, horse-power	31,400	28,600
,, ,, ,, coal consumption, tons per day ...	583	578
Nineteen-knot trial coal consumption, tons per day	295	315
Twelve-knot trial coal consumption, tons per day	105	111

The above speeds and coal consumptions are the facts determined by the Trial Board of the Navy Department.

The steam radii of the two vessels are computed from these official figures and from the fuel capacity of the vessels. As the fuel capacity of each vessel is the same and as the coal consumption of the *North Dakota* is less, it is quite evident that her steaming radius is greater. There can be no better criterion of the actual abilities of two vessels than shown by the results of the official acceptance trials.

An inspection of the above table shows at once that the *North Dakota* developed a higher speed than the *Delaware* on all the high-speed trials, and has the highest speed on the measured mile, the higher average for the five high-speed runs and developed a higher speed during the full power trials.

The table also shows that the *North Dakota* was the most economical vessel on both nineteen and twelve-knot runs, burning twenty tons less per day on the nineteen-knot run and six tons per day on the twelve-knot run and on the full-speed test. Although the coal consumption is slightly less on the *Delaware*, the speed for the *North Dakota* is higher.—*Abstract from "Scientific American" and "Army and Navy Journal."*

Note.—It should be noted that the coal consumption of the *North Dakota* on the high-speed test is for a somewhat higher speed than the *Delaware*, and that for small increases of speed near the maximum the coal consumption rapidly increases. It should be further noted that the higher top-notch speed of the *North Dakota* permits her to reach her destination quicker than the *Delaware*.

MILITARY NOTES.

Home. The following are the principal appointments which have been made :—Major-General (Hon.)—H. T. Jones-Vaughan, C.B., to be Colonel The Loyal North Lancashire Regiment. Colonels—E. D. J. O'Brien to command of Potchefstroom District (South Africa), with temporary rank as Brigadier-General; F. G. Stone, R.A., to command the Royal Artillery South-Western Coast Defences.

Territorial Force.—Major-General—G. M. Bullock, C.B., to command West Riding Division.

Indian Army.—Major-General—R. L. Payne, C.B., D.S.O., to command Karachi Brigade.

Honorary Distinctions.—His Majesty the King has been graciously pleased to approve of the following regiments being permitted, in recognition of services rendered at the battle of Beaumont on the 26th April, 1794, and at the battle of Willems on the 10th May, 1794, to bear upon their colours or appointments the distinctions as follows :—

Regiment.	Honorary distinctions awarded.
Royal Horse Guards	Beaumont. Willems.
1st (King's) Dragoon Guards	Beaumont.
2nd Dragoon Guards (Queen's Bays)	Willems.
3rd (Prince of Wales's) Dragoon Guards	Beaumont. Willems.
5th (Princess Charlotte of Wales's) Dragoon Guards	Beaumont.
6th Dragoon Guards (Carabiniers)	Willems.
1st (Royal) Dragoons	Beaumont. Willems.
2nd Dragoons (Royal Scots Greys)	Willems.
6th (Inniskilling) Dragoons	Willems.
7th (Queen's Own) Hussars	Beaumont. Willems.
11th (Prince Albert's Own) Hussars	Beaumont. Willems.
15th (The King's) Hussars	Willems.
16th (The Queen's) Lancers	Beaumont. Willems.

His Majesty the King has been graciously pleased to approve of the following regiments being permitted, in recognition of services rendered as marines on board vessels of the British Fleet during the engagements stated, to bear upon their Colours a Naval Crown, superscribed in each case with the date of the action :—

Regiment.	Action.
The Welsh Regt.	Admiral Sir George Rodney's victory on the 12th of April 1782.
The Queen's (Royal West Surrey Regt.)	Admiral Lord Howe's victory on the 1st of June, 1794.
The Worcestershire Regt.	

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The Imperial Manœuvres of 1909.—Last year's Imperial Manœuvres, from the point of view of the number of men engaged, were not so important as in previous years, only 7 divisions of infantry and 2 of cavalry—about 60,000 men—being placed in the field. But the presence of the German Emperor gave them a special significance, and the scheme of operations, as well as its execution, seems to have been both interesting and instructive.

The following was the composition of the forces of the two sides:—That of the Northern Force consisted of the Ist and IXth Army Corps, each of 2 divisions, and the 7th Cavalry Division, a total of 53 battalions of infantry, 36 squadrons of cavalry, 16 field batteries, 3 horse artillery batteries, 8 field howitzer batteries, 3 batteries of heavy howitzers, in all 120 guns, 4 Pioneer companies, 34 infantry machine guns, 4 cavalry machine guns, 1 Cyclist company, 2 bridging trains, and 1 cavalry bridging train. It was commanded by the Arch-Duke Eugene, who is a General of Cavalry and Inspector-General, and had already given proofs of his skill as a tactician, having in 1907 commanded with brilliant success one of the opposing armies at the Imperial Manœuvres in Carinthia.

The Southern Force was formed of the IInd Army Corps, comprising 3 divisions of infantry and 1 of cavalry, under the command of General von Versbach, who for the last year has been at the head of this Corps. His force was made up as follows:—41 battalions of infantry, 33 squadrons of cavalry, 12 field batteries, 3 horse artillery batteries, 6 field howitzer batteries, 3 batteries of heavy howitzers, in all 96 guns, 3 companies of Pioneers, 50 infantry machine guns, 4 cavalry machine guns, 1 Cyclist company, and 2 bridge trains.

On both sides each division had a telegraph sub-division, a hospital division, and a provision column, with reduced effectives; each Corps possessed a telephone detachment; each side had a balloon company; while the North side had, in addition, a detachment of Army telegraphists. For the first time, and by way of experiment, fortress artillery search-lights were used; each infantry division had two: one horse-drawn the other conveyed on an automobile. Automobiles, moreover, played at these manœuvres a much greater *rôle* than ever before. At the Imperial Headquarters there were 12 members of the Automobile Corps and 3 of the Motor Cyclists; attached to the *Direction* of the manœuvres were 9 and 3 respectively. All of the Corps commanders had at their disposal 3 automobilists and 4 motor cyclists, while 3 motor cyclists were attached to each infantry division, and to each division of cavalry an automobilist.

Considerable use was also made of motor trains for the supply of munitions and provisions; some 20 automobile trains in all were employed, each drawing 2 or 3 trucks with a capacity of from 6 to 8 tons; and in addition there were some automobile wagons, several road locomotives, and motor workshops for repair purposes. One of the divisions experimented with some fast motor wagons for carrying provisions. In general, the new wheeled kitchens were being tried for the first time. But their principal object, which is to supply the men rapidly with a hot meal, was only attained where care was taken to see that these kitchens followed the troops closely up.

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Among the innovations to be noted were the formation of brigades of artillery attached, by way of experiment, to the infantry divisions, the employment of 15-cm. (6-inch) heavy howitzers in the field, and, lastly, the exceptional number of the machine guns placed in line. The new uniform of grey cloth, worn by the 4th Division of the Southern Force, gave an interesting glimpse of what before long will be the appearance of the whole army when in the field.

The general theme of the manœuvres, which took place between the 8th and 11th of September, was as follows:—

The Northern enemy (Red) has penetrated into Bohemia to the west of the Elbe with his 1st and 2nd Armies, and has advanced by Prague and Kolin. The 4th Army arrives from Silesia in order to effect its

junction with the two first. In face of this adversary, on the Southern side (Blue), the bulk of the army is assembled between Budweis and Jamnitz, but only slowly completes its first march. The map shows the initial situation on the 8th September.

With regard to the detailed orders, they were as follows for Red side: the 1st and 2nd Armies were to reach on the 8th September the line Selcan-Světla. The 4th Army, by Zwittau and Neustadt, making a forced night march, was to be, on the morning of the 8th, with the IXth Corps at Bory-Krizanau, with the 1st at Kunstadt-Boskowitz, with its 7th Cavalry division at Tischnowitz. The general task of this 4th Army was to advance sufficiently to enable it to co-operate with the two others,

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all that was known of the enemy being that he was assembling a strong force between Znaim and Budweis.

On its side, the Blue force, concentrating on the line Jamnitz-Budweis, was presumably to be ready to march on the evening of the 10th; its IIIrd Corps (supposed) had reached Znaim by Vienna by train and marched from there on Jamnitz. Taking into account this movement, the IInd Corps, which was concentrated about Znaim, moved by a forced night march on Lessowitz, Jarmeritz and Biskupitz, arriving on the morning of the 8th, while the 3rd Cavalry Division occupied Tajkowitz. It was known that the Bohemian armies of the enemy had reached on the 6th September the line Prague-Kolin, and the army from Silesia the district of Zwittau-Neustadt. The orders were to move on the 9th and attack this last enemy.

The "Red" Force had 12 battalions of infantry, 3 squadrons of cavalry, and 6 batteries more than its opponent; the "Blue" side, on the other hand, had 16 more infantry machine guns. On the 8th of September, in the morning, the disproportion seemed partly effaced by the fact that the Blue Forces were concentrated on a narrow front, while the Reds were divided into two groups of almost equal strength, separated some 40 km. (24¾ miles) from each other.

On the 8th September, early, the North side was informed that its armies 1 and 2 could reach on the 10th the line Triesch-Moldauthein; at the same time it received orders to harass the enemy energetically, so as to impede the concentration which he was effecting near Budnitz, in order to oblige him to detrain his troops as far in the rear as possible. The tasks of the two opposing forces was thus tolerably strictly defined; that of the Red being complicated by the fact that the IXth Corps was only 30 km. (18¾ miles) from the enemy, whilst the Ist Corps had to cover 60 km. (37¼ miles) in difficult country. The duty of falling on the flank of the enemy could only then be carried out by the IXth Corps, for which the line Gross-Meseritsch-Trebitsch-Budnitz must, in a general way, mark the extreme left flank, if it was to be in a position afterwards to act with the Ist Corps.

The Southern Force was thus obliged to distribute its scouts over a wide front; each division had its sector; in addition, some officers' patrols were despatched by the Commanding General to reconnoitre over a wide radius, and detachments ordered to occupy the fords of the Iglawa and Oslawa rivers.

In consequence of the forced marches of the opening stages, the 8th was more or less a day of rest, except for the scouting troops, who made some considerable marches, while there was sharp fighting on the Oslawa, as the result of which the fords and the heights commanding them remained in the hands of the Blue troops. Generally, in the IInd Corps more than on the Red side, it was considered preferable to use infantry for the reconnoitring service, as the broken and woody nature of the country made it very difficult for cavalry.

The theatre of the manœuvres was almost limited by the Rivers Zwittawa to the east, the Iglawa to the south, and by the line Iglau-Zwittau to the north-west. Its topography is that of an elevated, undulating plateau, cut by mountain ranges branching in various directions, but inclined generally towards the south-east. Along the Bohemian-

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Moravian frontier the height was from 1,800 to 2,400 feet; towards the south it was only from 900 to 1,200 feet. The water courses flow through narrow valleys, often turning to mere gorges, the ground of which is frequently marshy, through which run only a small number of paths; while their steep slopes are mostly covered with wood. Hence numerous checks in the marches. Between these deep breaks the plateau showed long stretches of country almost entirely covered with forests, the configuration of which was continually changing. Most of the paths were on the high ground, sometimes on the slopes. There was a want, however, of prominent points in the heart of these forests, which rendered it extremely difficult to obtain any general view of the country; on the other hand, this gave considerable opportunities for making the manœuvres instructive; it seemed, indeed, as if the terrain had been expressly chosen with the view of providing interesting tactical problems.

The 9th September was the real opening day of hostilities. On the Northern (the Red) side the IXth Corps received orders to push energetically forward by Trebitsch, sending a strong detachment of all arms to occupy Tassau, the 7th Division of Cavalry being held ready to move on Namiest and co-operate with the IXth Corps, while the Ist Corps advanced by Tischnowitz.

The commander of the South (Blue) side, aware that the enemy was advancing in two distinct bodies, moved with the view, taking advantage of being able to move on interior lines, of throwing his force on that of the enemy, which was advancing by Gross-Meseritsch. The attempt seems to have failed, as the Red Force in the evening succeeded in occupying Gross Bittesch. It is impossible to attempt to follow the operations, as neither the details given nor the map afford any clear guide to them, but on the evening of the 10th the Red side effected the junction of his two armies, the Blue falling back in the direction of Jarmeritz. Further fighting occurred the next day, resulting in nothing decisive, and at midday the "Cease fire" was sounded and the manœuvres came to an end.

The system adopted at these manœuvres of giving the commanding generals freer hands, seems to have worked well. No limits were placed on their choice of terrain for fighting, nor on the time selected for fighting; in this respect, from the beginning to the end, the manœuvres approached actual war. Some good marching was done by the troops; the 25th Division of Infantry and the Viennese Cavalry Division, for instance, covering 70 km. (43¼ miles) in twenty-four hours. The Southern Army, in attempting to overwhelm one part of the adversary's force, covered 90 km. (56 miles) and fought three battles in three days. It has to be admitted, however, that some of these forced marches were necessitated by an exaggerated battle front, as also by the attempt to correct initial errors made in the concentration and original distribution of the troops. The telephone arrangements worked well, for the first time the wires were carried right up to the units forming the fighting line.

The new guns proved their perfect fitness for field work. Every opportunity was seized of taking up covered positions and using indirect fire, and it was plain that officers and men had learnt to appreciate and to employ their new weapon to the best advantage.

The wheeled kitchens proved perfectly successful, where they were made to keep up with the troops, the men being supplied with a

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hot midday meal, even during battle, for which formerly they would have had to wait until late in the evening. The cavalry, however, require kitchens of a lighter type, which can keep up with them at all speeds; this year neither cavalry division on either side benefited much by theirs, as they remained with the baggage trains.

The mechanical trains have almost entirely taken the place of the horse-drawn ones; the good work they performed deserves all the more notice when the difficulties of the manœuvre terrain and the steep gradients to be overcome are taken into consideration, especially as most of the wagons were loaded up to their maximum capacity, that is 10 tons.

The wireless telegraphy and the captive balloons rendered excellent service and have proved themselves anew indispensable for the movements of large bodies of troops. The railways also proved equal to the strain put upon them; the line from Budnitz to Brünn, whose carrying capacity is somewhat limited, yet was able, between the 12th and 14th September to transport 2,185 officers, 47,567 men, 5,791 horses, 762 vehicles, and 2,812 metric quintals (a metric quintal = 200 lbs. avoirdupois) of stores, without interfering with the normal traffic. This represented the movement of about 100 trains with 3,500 wagons.—*Précis* from *Revue Militaire Suisse.*

France.

Creation of Two New Balloon Companies. — The balloon battalion, consisting of four companies, attached to the 1st Regiment of Engineers at Versailles, not being strong enough to carry on the work connected with captive balloons and the management of the new airships, a Decree of the 24th December last directs the transformation into balloon companies of two companies of fortress sappers. These two new balloon companies are attached to the 20th and 6th Engineer Battalions stationed at Toul and Verdun; the two companies thus transformed belonged to the 14th and 15th Engineer Battalions in garrison at Grenoble and Avignon.—*Bulletin de la Presse et de la Bibliographie Militaires.*

The Study of Foreign Languages.—It is announced that, with a view to encouraging a deeper study of foreign languages among the future officers of the General Staff, the Minister of War has decided to grant each year six months' leave on pay for abroad to a certain number of lieutenants who are candidates for the Superior School of War, and who, in addition to the educational qualifications required, possess the character and judgment necessary for admission to the School.—*La France Militaire.*

The Military Medal.—Originally the military medal was exclusively reserved for non-commissioned officers and soldiers, and was looked upon as a sort of inferior decoration. In order to enhance its value it was decided that it could be conferred on general officers, when they had been Commanders-in-Chief or had filled the office of Minister of War; later it was extended to generals who had held command of an army corps for two triennial periods at least, and who in addition had sat on the Superior

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Council of War, and been accorded the Grand Cross of the Legion of Honour; and later still to Inspectors of Army Corps under certain conditions. A Presidential Decree of the 24th November last has now extended the privilege to Generals of Divisions who are Grand Crosses of the Legion of Honour, who have commanded an army corps for more than three years, or who have during the same period of more than three years carried out important duties, or those of members of the Superior Council of War, or who have rendered exceptional service in the organisation of national defence.—*Revue Militaire Suisse.*

Issue of a Wine Ration in the French Army.—Circular No. 77 of the *Direction du Service de Santé*, which is published in the *Bulletin Officiel*, No. 52, of 1909, contains instructions on the use of tea and fermented liquors in the French Army According to the directions hitherto in force an issue of tea, to be drunk at meals, is authorised on the appearance of any epidemic. The great value of tea consists in the fact that the water must be boiled and therefore sterilized. It is, however, recognised that drinking tea at meals does not suit the French taste or customs. The circular therefore recommends that the tea should be partaken of between meals, and that a ration of about 8 ozs. of wine, or its equivalent in some other form of fermented liquor, should be allowed at each of the principal meals. The opinion is expressed that a moderate quantity of fermented liquor taken with a meal can only produce a good result, and that it has in fact a soothing influence, stimulating the nervous system and increasing the man's resisting power while diminishing fatigue.

Advantage should be taken of these valuable properties as often as possible, and not only when an epidemic is feared or has begun.

Up to the present wine has only been allowed as an issue to the troops on special occasions. In future the wine ration is likely to be issued pretty regularly for the whole army, as it already is in some of the corps.

An issue of fermented liquor in moderate quantities really improves the soldier's diet, and the men in charge of messing should remember this when expending the mess funds.

Officers in command are asked to watch the application of the above principles.—*Contributed by General Staff.*

Russia.

New Organisation of the Remount Department.—The last organisation of the remount service, dating from 1900, entrusted to the Inspector of Remounts the direction of this service at the same time as that of the depôt cavalry squadrons. This general officer, who was styled "Inspector-General of Remounts and Cavalry Depôt Corps," was under the direct orders of the Inspector-General of Cavalry. The superintendence of the artillery remount service was entrusted to an officer of the General *Direction* of the Artillery.

The Prikaze, No. 130, of the 25th March, 1909, separates clearly the remount service from that of the cavalry depôts, and amalgamates the artillery remount service with that of the cavalry. It creates a "Department of Army Remounts," the head of which, a lieut.-general or general-in-chief, is under the immediate orders of the Minister of War, and

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places depôt cavalry brigades under the orders of the Inspector of Cavalry. This measure proceeds on the same principle as that recently applied to the artillery and engineers; that is to say, separation of the troops and administration, the first placed under the orders of a special inspector, the second subordinated to a dependent department of the Minister.

A *Memo. on the Duties of the Direction of Army Remounts* lays down the duty of the new department. It is, in the main, the same as that which formerly devolved on the *Inspection* of Remounts and Cavalry Depôts. The department is charged with the purchase of horses for the whole Army and for the Corps of Frontier Guards, takes part in the work of the census and requisitioning of horses and vehicles, and, jointly with the Studs Committee, looks after the reports favourable to the production and development of the type of horse necessary for the Army.

The *Direction* of Army Remounts comprises :—

The head of the department, lieut.-general or general-in-chief.
Two assistants, lieut.- or major-generals.
1 head of the *Chancellerie*, a major-general or colonel.
2 field officers.
1 subaltern officer.
7 secretaries.

A *Memo. on the Purchase of Horses for the Army* brings into harmony the organisation and working of the Remount Commissions with this new organisation of the Superior *Direction*.

The Remount Commission of Orenburg, in connection with which a remount depôt has been formed, becomes charged, in principal, with the purchase of the horses intended for the scouts of the infantry regiments.

A new permanent Remount Commission has been created, whose jurisdiction extends to the Governments of Tobolsk, Tomsk, Yenisseisk, Irkutsk, and the territories of Cemipalatinsk and Akmolinsk; its headquarters is at Tomsk.

The Remount Commissions of Riazan, Nijni-Novgorod, and Astrakhan have been removed respectively to Tambov, Penza, and Tsarytzin.

Military Contribution of Finland.—An Imperial Manifesto of 1905 abrogated the law of 12th July, 1901, in regard to military service in Finland. By a Manifesto of 7th October, 1909, the Emperor declares that the determination and division of the military charges for the whole Empire is a question of general legislation, "which cannot be definitely settled by way of local legislation," and that the question of the military service of the Finlanders will be regulated in accordance with the general legislation of the Russian Empire. In the meantime the Finlanders are released from the obligation of military service, and the Finland Treasury is to pay to the Russian Treasury an annual indemnity, fixed as follows: for the years 1908 and 1909, ten million marks (£665,000) per annum, taken from the militia fund, completed by the reserves of the State funds; for the following years, the sum will be fixed by an Act which will be submitted to the Diet.—*Revue Militaire des Armées Etrangères.*

Russia.

Increase of the Railway Troops.—The railway troops, which have been progressively increased in 1909, consist at the present time of 1 regiment of 2 battalions of 4 companies each, 12 battalions, 6 independent field companies, and 3 company cadres, intended to form, at the moment of mobilisation, 3 reserve battalions of 4 companies each.

The regiment, 4 battalions of 4 companies each, 3 independent companies, and 3 company cadres form part of the troops in Europe; those of Turkestan comprise 2 battalions of 6 companies each and 1 independent company; whilst 4 battalions of 6 companies each, 2 to 4 companies, and 2 independent companies are stationed in the Far East. The whole gives 74 companies plus 3 company cadres.

According to *Streffleurs Militärische Zeitschrift*, the regiment has the same effective strength whether on a peace or war footing—that is, 65 officers, and 1,735 men. The European battalions on a peace footing have a strength of 28 officers and 625 men, and on a war footing 30 officers with 1,112 men and 44 vehicles, of which 1 is for officers, 2 for medical purposes, 1 for transport of sick and wounded, 10 baggage wagons, which carry in addition provisions for two days, 13 commissariat wagons with four days' provisions, 5 field kitchens, 4 ammunition wagons, and 8 with field workshops.—*Bulletin de la Presse et de la Bibliographie Militaires.*

The Indication of Artillery Fire at Manœuvres (Translated from the "Ruskii Invalid" of 19th October, 1909.—In the Russian Army the method usually adopted for indicating the direction and range of artillery fire is Colonel Smislovski's "fire screen." This screen indicates the range (to within half a verst, about 600 yards) and the direction of fire. The latter is shown by a compass bearing, the numerical equivalent of which is signalled on the screen itself by means of movable arms. Smislovski's system has been objected to, as it is cumbrous and complicated, and the screen is liable to be blown down and broken in a high wind. V. Gavrilov recently proposed to replace it by a system in which the target was indicated by Morse signals, and its position plotted on to a map marked in squares. It seems unnecessary to show the range on a "fire screen" at manœuvres, for mere knowledge of range does not guarantee accurate fire, and a faulty estimate of range may be corrected at once by observation of fire. Showing the range on a "fire screen" is also of little use in pointing out the target, since the gunner who erects the screen, and the umpire who decides whether the target indicated is under fire or not, both estimate the range by eye. A satisfactory method of indicating the fire of artillery should permit both the troops and the umpires to recognise clearly and easily, without having recourse to auxiliary apparatus, whether a detachment is actually under fire. Simplicity and facility in judging by eye are particularly important, for the umpire's decision must be given quickly. With Smislovski's method it is by no means easy to ascertain the target at which the enemy's artillery is firing. Besides knowing how to indicate the numbers on the screens, it is necessary to use a compass, with a stand and plane table; and a specialist artillery umpire is therefore required to work the apparatus at manœuvres.

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I now venture to draw the attention of commanding officers to a method of indicating artillery fire by the alignment of screens bearing upon the target. It is extremely simple, is worked by eye, and has been tested with success at the Officers' Artillery School.

The fire of a battery is indicated by raising a large "fire screen" of orange-coloured canvas, which should be distinctly visible both to the enemy and to the umpires. In order to lessen the difficulty of erection in a high wind, the dimensions of the canvas screen may be reduced to 4 feet 8 inches square. The screen is erected while fire continues, and is lowered when it ceases. A "troops screen" is erected some 30 to 40 paces in front of the "fire screen," and this indicates the nature of the target at which fire is directed. When infantry lines are under fire, a *white* screen is put up; artillery is indicated by a *red* screen; cavalry by a *blue* screen; and a mixed column by a *yellow* screen. It is convenient to carry these screens in the form of covers, which can be slipped on over a square frame. The pole of the "troops screen" should be 10½ feet to 14 feet long, and the screen itself 3 feet 6 inches to 4 feet 8 inches square. Similar screens are used in Colonel Smislovski's system, only his "troops screen" is small, and is placed alongside the "fire screen," so as not to hide the numerical signals. In order to indicate direction of fire, it is sufficient to erect the "fire screen" in rear of the "troops screen" in such a manner that their alignment bears upon the target. All necessity for using plane tables, compass bearings, etc., is thus avoided. On coming into the alignment of the screens the troops themselves can see that artillery fire is directed upon them, and the decision of the umpires can be given immediately. Determination of the direction of artillery fire is thus rendered extremely simple, and within the comprehension of every man in the ranks.—*Contributed by the General Staff.*

United States.

Report of the Adjutant-General.—The Adjutant-General of the Army, Major-General F. C. Ainsworth, in his annual report shows that with an increase in the authorised strength of the Army during the year ending 15th October, 1909, there was a larger increase in the actual strength, as follows:—

	Regular Army. Total.[1]	Phil. Scouts. Total.[1]	Officers.	[2]Total Enlisted men.	Grand Total.
Authorised strength:					
15th October, 1909 ...	83,219	5,909	4,609	84,519	89,128
15th October, 1908 ...	82,050	5,674	4,473	83,251	87,724
Increase during year	1,169	235	136	1,268	1,404
Actual strength:					
15th October, 1909 ...	76,049	5,729	4,366	77,412	81,778
15th October, 1908 ...	72,628	5,538	4,230	73,936	78,166
Increase during year	3,421	191	136	3,476	3,612
Vacancies:					
15th October, 1909 ...	7,170	180	243	7,107	7,350
15th October, 1908 ...	9,422	136	243	9,315	9,558

[1] Including officers.

[2] Including Philippine Scouts.

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The geographical division was as follows, including Hospital and Medical Reserve Corps:

	Officers.	Enlisted men.	Total.
In the United States	3,273	58,687	61,960
In Alaska	49	1,112	1,161
In the Philippines:			
Regular Army	705	13,535	14,240
Philippine Scouts	157	5,572	5,729
In Porto Rico	29	598	627
In Hawaii	57	1,224	1,281
Troops en route and officers at other foreign stations	96	169	265
Total	4,366	80,897	85,263

During the fiscal year 389 officers and 6,225 enlisted men were sent to the Philippines, making a total of 7,454 officers and 172,327 enlisted men since the commencement of the war with Spain.

The percentages of desertions by branches of the Service during the fiscal years 1905-1909 are shown in the following table:

	Percentages.				
Branches of service.	1909.	1908.	1907.	1906.	1905.
Field Artillery	7·03	5·74	5·97	9·15	9·40
Engineers	5·53	4·73	4·98	7·71	5·45
Coast Artillery Corps ...	5·50	3·93	6 58	7·79	8·03
Cavalry	4·76	5·68	6·25	7·23	6·46
Infantry	4·26	3·90	4·62	6·10	6·33
Hospital Corps	4·18	4·55	4·18	5·17	4·06
All others, including unassigned recruits	5·48	5·42	7·19	12·61	6·44
The Army	4·97	4·59	5·62	7·43	6·79

Of the regiments serving in the United States the 6th Infantry had the highest percentage of desertions (12·98), the 8th Cavalry (12·74) being second, and the 4th Field Artillery third (10·46). The 24th Infantry and 3rd Cavalry were only 1·34 and 3·39 per cent. In the Field Artillery the 6th Regiment had the lowest, 7·67 per cent.

Of the troops, batteries and companies, Company K, 28th Infantry; Company M, 6th Infantry; Battery B, 4th Field Artillery; Troop B, 8th Cavalry; and Battery E, 1st Field Artillery, head the list, the percentages of desertions from those organisations being 28·85, 20·21, 18·40, 17·92 and 17·68, respectively. The 147th Company, Coast Artillery Corps, appears at the top of the list for that branch of the Service, the percentage of desertions being 16·56. No desertions were reported during the year from Troop G, 9th Cavalry; Company C, 1st Battalion of Engineers; Companies C and G, 12th Infantry; Companies B, E and M, 24th Infantry, and the 59th and 118th Companies, Coast Artillery Corps. The percentage in the Army in the Philippines was 0·35; Army in Cuba, 2·13; remainder of the Army, 8·27; the whole Army, 4·97. Of the white troops 5·17 per cent. and of the coloured but 0·56 per cent. were deserters, as compared with 4·97 per cent. for the whole Army. Of the deserters 1,013 were appre-

United States.
hended and 315 surrendered. Of the men who deserted during the fiscal year 1908 but 652 were apprehended and 229 surrendered. This marked increase is due to the vigorous measures adopted for the apprehension of deserters. Of 912 discharges, 486 were by purchase, 96 for disability, 265 for various delinquencies, and 49 by favour.—*Army and Navy Journal.*

NAVAL AND MILITARY CALENDAR.

JANUARY, 1910.

7th (F.) 2nd Bn. Bedfordshire Regiment left Gibraltar for Bermuda.
11th (T.) 2nd Bn. King's Royal Rifles left Bombay for Shorncliffe.
15th (Sat.) H.M.S. *Ocean* arrived at Plymouth from the Mediterranean.
19th (W.) 2nd Bn. Bedfordshire Regiment arrived at Bermuda.
20th (Th.) 2nd Bn. Duke of Cornwall's Light Infantry left Bermuda for Bloemfontein (S. A.)
28th (F.) 1st Bn. Northamptonshire Regiment left Bombay for Aden.

FOREIGN PERIODICALS.

NAVAL.

ARGENTINE REPUBLIC.—*Bolétin del Centro Naval.* Buenos Aires: November, 1909.—Has not yet been received.

AUSTRIA-HUNGARY.—*Mittheilungen aus dem Gebiete des Seewesens.* No. 2. Pola: February, 1910.—"Aviation and the Navy." "Three-gun Turrets." "A New Solution of Ships' Turbines Problems." "The Firing at the *Iéna*." "Reorganisation of the School for Training Gunnery Specialists in the French Navy." "Strength of Foreign Fleets."

BRAZIL.—*Revista Maritima Brazileira.* Rio de Janeiro: November, 1909.—"The Staffs of the Naval Forces" (*continued*). "The *Dreadnoughts*." "A Proposal for a Universal System of Pilotage Buoys." "Practical School of Artillery" (*continued*). "The Brazilian Navy." "Thermo-Electric Generator." "Hydro-Electric Power in Brazil" (*continued*).

CHILI.—*Revista de Marina.* Valparaiso: October, 1909.—"An Urgent Law." "Some Ideas on the System of Organisation of the Crews on board Ships of the Fleet." "Determination of the Error and Correction of Chronometers by the Method of Equal Altitudes of Double Stars." "Pre-

liminary Information." "Battle Practice in the English Fleet." "The Radio-telegraphic Station on the Poulsen System at Cullercoats." "Night Fighting." "Submersible Armoured Cruiser."

FRANCE.—*Revue Maritime.* Paris: December, 1909.—"Statistics of Shipwrecks and other Mishaps at Sea in 1907" (*concluded*). "The "Brown" Armature." "Kiel? Wilhelmshaven!"

La Marine Française. Paris: January, 1910.—"The Workmen of the Navy: Their Salaries; is it necessary to raise them?" "An Interview: How the Navy must be Reorganised." "The Necessity of a Reform of the Administrative Services of the Yards." "The Coal of the Navy." "How ought the Cabinet of the Minister of Marine to be Formed?" "The Administrative *Personnel* of the Navy."

La Vie Maritime. Paris: 10th January, 1910.—"The 23,000-ton Battleship." "The Reform of the Navy." "The Visit of the Chinese Naval Mission to the French Yards." "The Delays in Completing the *Waldeck-Rousseau.*" "Injuries to the Boilers of the *Montcalm.*" 25th January.—"Anglo-German Rivalry." "The Decree of the 18th December, 1909." "The Superior Council of the Navy." "The Visit of the Chinese Naval Mission to the French Yards." "*A propos* of the *Danton* Class and their Foreign Rivals." "The Clyde and Forth Canal."

Le Yacht. Paris: 1st January, 1910. — "The Re-floating of Submarines." "Yachting Notes." "The Improvement of the Loire: The Port of Nantes." "The New U.S. Battleships." 8th January.—"The Decree of the 18th December and the Corps of Officers." "Yachting Notes." "The Evolution of Submarines." 15th January.—"Blockade Torpedoes." "Yachting Notes." "The New Military Port at Dover." "The Japanese Armoured Cruiser *Ibuki.*" 22nd January.—"The Distribution of our Naval Forces." "Yachting Notes." "Foreign Navies in 1909." "The *Vanguard.*" 29th January.—"The 23,400-ton Battleships." "Yachting Notes." "American River Steamers." "Mine-laying Ships."

Le Moniteur de la Flotte. Paris: 1st January, 1910.—"The Law of Numbers." "The Construction of our Battleships." "The Navy in 1909." "Promotion among Men of the Fleet." "The Reorganisation of the Central Administration." 8th January.—"Moral Education." "Naval Veterans." 15th January.—"Light Artillery." "The Examination for the Administrative *Personnel.*" "Decentralisation." 22nd January.—"The Meeting of the Superior Council of the Navy." "The Navy in Parliament." 29th January.—"The Law of Numbers" (*concluded*). "The Fleet of the Second Line." "The Entrance Examination for Chief Mechanics, 2nd Class." "The Navy in Parliament."

GERMANY.—*Marine Rundschau.* February, 1910.—"On the Origin and Value of Naval-War Historical Sketches." "The German National Economy in War." "Prussian Army Reform of 1859-60." "Admiral of the Fleet Lord Fisher of Kilverstone." "The Reorganisation of the U.S. Navy." "Naval-War History: Its most Important Phases with regard to Naval Tactics." "The Fleets of the World."

ITALY.—*Rivista Marittima.* Rome: December, 1909.—"The Firing Experiments at the French Battleship *Iéna.*" "Subsidies for Freights." "On the subject of the London Conference." "Navigation in Italian Ports during 1907."

PORTUGAL. — *Revista Portugueza, Colonial e Maritima.* Lisbon: November, 1909. — "*Régime* of the Native Proprietary" (*continued*). "Colonial Problems" (*continued*). "The Bar at Mandovy and the Necessity of Studying the Channels of the East River and the "Zuary."" "Genealogical and Biographical *Data* of some Fayal Families."

Annaes do Club Militar Naval. Lisbon: November, 1909.—"Some Reflections on our Naval Organisation." "The Anglo-Portuguese Alliance." "Internal Organisation of the Divisions." "Naval Medical Services." "The War in Guinea" (*continued*).

SPAIN.—*Revista General de Marina.* Madrid: January, 1910.—"Construction, Management, and Organisation of Modern Ships of War." "Artillery Progress." "The Military Industry of Powders and Modern Explosives." "Four Words on Explosive Projectiles." "Politics, History, and the Navy."

UNITED STATES.—*United States Naval Institute Proceedings.* No. 4. Annapolis: December, 1909.—"How shall we Induce our Men to Continue in the Navy?" "The Fleet Ready to Fight." "The Uncertainties of Geographical Position in Polar Exploration." "A Study of Naval Strategy." "Duelling in the Old Navy." "Naval Economy." "Endurance Tests of Krupp Naval Guns of Large Calibre." "Compensation of the Compass and Determination of the Deviation without the use of Observed Azimuths." "The French Commission on Naval Tactics."

MILITARY.

AUSTRIA-HUNGARY.—*Danzer's Armee-Zeitung.* Vienna: 6th January, 1910.—"New Year, 1910." "Some Words about Ourselves at the Turn of the Year." "Echoes of the "Friedjung" Trial." "Servia's Armament Policy." "The "Transferring" Decree." "The Mercantile Marine in the Austrian Ministry of Trade." 13th January.—"Reminiscences of an Hungarian Prisoner of War, 1848-49." "Djavid's Journey." "The Italian Danger in Switzerland." "The Psychology of Militarism." 20th January.—"A Letter to the Editor." "The General Staff on the Prisoners' Bench." "Reminiscences of an Hungarian Prisoner of War," 1848-49" (*continued*). "The Enquiry into the Physical Training of Youth." "New Regulations for the Commissariat Service in the Field." 27th January.—"Educating for Revolution." "The Clerical Austria." "Tunis-Tripoli." "The Prophylactic of Courts of Honour." "Reminiscenses of an Hungarian Prisoner of War, 1848-49" (*continued*).

Streffleurs Militärische Zeitschrift. Vienna: January, 1910.—"The Commanding Generals in Prague from the Year 1621 up to the Present Time." "The Albanian Rising in 1909." "The Spanish Fighting in Morocco." "Completion of the German Infantry Drill Regulations."

"Foreign Grand Army Manœuvres, 1909: Turkey, England, Belgium." "Military Training of Youth, and Volunteer Target Practice." "The Modern Battleship and its Importance as a Fighting Machine." "Military Schools Reports."

Kavalleristiche Monatshefte. Vienna: January, 1910.—"Fire Strength and Auxiliary Weapons of Large Bodies of Cavalry." "The Attacks of Marguerite's Cavalry Division at Sedan." "Caveant Consules." "The K.u.K. *Landwehr* Cavalry." "The Training to the Use of the Curb." "The Black Hussar." "The Arab Horse and his Importance for the Stud." "The Training for Long-distance Rides." "Glance at the Flat Race Season, 1909." "The Remounting of the Protectorate Troops in German South-West Africa."

BELGIUM.—*Bulletin de la Presse et de la Bibliographie Militaires*: 15th December, 1909.—"Regulation of the 14th October, 1907, for the Field Service in the Japanese Army" (*concluded*). "Military Institutions of the United States" (*continued*). "Manœuvre Regulations of the Russian Infantry, 1908." 31st December.—"Military Institutions of the United States" (*concluded*).

FRANCE.—*Journal des Sciences Militaires.* Paris: 1st January, 1910. —"Military Impressions of Munich" (*continued*). "Note on the Estimate of Distances." "The Officer of the General Staff." "War and Compulsory Service" (*continued*). "For the Great Force of the Army and the Better Health of the Nation" (*concluded*). "Practical Employment of the Machine Gun in the Offensive Combat." 15th January.—"War and Compulsory Service" (*continued*). "The Removing of the Wounded on the Field of Battle." "The Employment of Engineer Troops in Conjunction with the other Arms." "Study on Communication by War Dogs." "Pay and Retirement" (*continued*).

Revue d'Infanterie. Paris: December, 1909.—"The German Cavalry Division at the Imperial Manœuvres of 1908." "Battle Firing" (*continued*). "The Infantry Battery" (*concluded*). "The Firing Test for Candidates for the Brevet of Military Aptitude." "Firing Competitions between Machine Gun Detachments of the Russian Army." "On the Subject of the Transformation of the Swiss Infantry Rifle."

Revue de Cavalerie. Paris: December, 1909.—"Rational Method of Preparing for Fighting with the *Arme Blanche* in the Cavalry." "A Study on Sedan" (*concluded*). "The Regulations of 1910" (*continued*). "The Non-commissioned Officers of Cavalry on Field Service."

Revue d'Artillerie. Paris: November, 1909.—"Fire against Masked Artillery." "Fire Studies: Short Guns." "Tactics at the Firing Schools."

Revue d'Histoire. Paris: January, 1910.—"The Armies of Louis XIV. in 1674." "The Department of War in the Year IV. (1797)." "Machine Guns in 1870." "The War of 1870-71: The National Defence in the Provinces." "Unpublished Letters of Napoleon I."

Revue Militaire des Armées Etrangères. Paris: January, 1910.—"The Grand Italian Manœuvres of 1909." "New National Defence Organisation in Denmark."

Revue Militaire Générale. Paris: December, 1909.—"The Spaniards in Morocco." "*A propos* of the Tactical Theme for the Competitive Examination for Admission to the Superior School of War, 1910." "Strategical Situation at the Opening of the Campaign of 1870." "The Emotions of the Chief." January, 1910.—"The Question of the Black Troops." The Grand Italian Manœuvres of 1909." "Steinmetz and Bazaine." "*A propos* of the Periods of Instruction in the different Arms." "Letter of a Belgian Officer."

GERMANY.—*Militär-Wochenblatt.* Berlin: 1st January, 1910.—"The Army Reorganisation of 1859-60." "The Duties of the Field Artillery in Fortress War." "The Reorganisation of the Russian General Staff." "Open Gymnastic Competition for German Officers at Dresden, 1909." 4th January.—"On the Tactical and Moral Importance of the Cone of Dispersion of the Bullets at the Battle Firing of Infantry." "The Grand Austro-Hungarian Manœuvres of 1909." "The Army Reorganisation of 1859-60" (continued). 6th January.—"Firing with most Rapid Effect of Field Artillery." "On the Tactical and Moral Importance of the Cone of Dispersion of the Bullets at the Battle Firing of Infantry" (*concluded*). "The Army Reorganisation of 1859-60" (*concluded*). 11th January.—"The Railway Transport of German Troops to East Asia." "A Riding Instruction for the Field Artillery." "Roumania from the Military-Geographical Point of View." 13th January.—"The New French Instruction for Fortress War." "The Commanding Generals of the German Army from 1889 to 1909" (*continued*). "Scouting." 18th January.—"The new French Instruction for Fortress War" (*continued*). "Military-Technical Review." "Peasants on the Chess-board." 20th January.—"The New French Instruction for Fortress War" (*concluded*). "The Rejuvenation of the Turkish Army and its First Manœuvres." "Peasants on the Chess-board" (*concluded*). 22nd January.—"Military Society of Berlin." "The Addenda to the Infantry Drill Regulation of August, 1909." "The Rejuvenation of the Turkish Army and its First Manœuvres" (*continued*). "Lieut.-General Friedrich von Strauss." 25th January.—"Frederick's Day: One Hundred and Fifty Years Ago" (*continued*). "The Political Position during the Winter and Spring of 1760." "King Frederick's Plan of Operations and Preparation." "The Rejuvenation of the Turkish Army and its First Manœuvres (*concluded*). "The Training of Field Artillery in Indirect Fire." 26th January.—"Service Jubilees in 1910." "The Single Projectile of the Field Artillery." "The Higher Leading in Presence of the Destructive Effects of the Modern Battle." "One Hundred and Fifty Years Ago" (*concluded*).

Artilleristiche Monatshefte. Berlin: December, 1909.—"What Lessons are to be Drawn from the Experiences of the War in East Asia, 1904-05, for the Use of the Artillery in Field War?" "Manœuvre Glances." "On the Regulation of the Height of Burst." "Experiments with Wire Gun-Tubes in the United States."

Jahrbücher für die Deutsche Armee und Marine. Berlin: January, 1910.—"Training for War." "On the New Infantry Firing Regulation." "How Napoleon, like Moltke, Strove to Guarantee the Unity of the

Command of the Army." "Cavalry Questions." "Ideas on the Demonstrative." "The Sketch for a German Penal Law Code and Military Penal Law."

ITALY.—*Rivista di Artiglieria e Genio.* Rome: October, 1909.—"Some Considerations on the Use of Field Artillery, with special regard to Covered Positions." "On the Defensive Organisation of Great Fortresses situated on Level Ground." "About the Calculation of the Accuracy of Range-finders with Self-contained Bases." "On Bomb-proof Works in Fortification." "A Type of Construction capable of Resisting the Strongest Earthquake Shocks." "Supplementary Officers and Officers of the Territorial Militia."

November, 1909.—"Some Considerations on the Employment of Field Artillery, with special regard to Covered Positions." "On Optical Telegraphy Apparatus, with particular regard to Automatic Mechanism." "A New Arrangement for Syntonic Radiotelegraphic Receivers."

Rivista Militare Italiana. Rome: 16th December, 1909.—"African Matters." "The Military Decadence of the Most Serene Republic of Venice" (*concluded*). "Tripolitana." "The Grand Manœuvres in Lombardo-Venetia." "The Spade Again." "Remarks and Comparisons on the Military Land Forces of Italy and Austro-Hungary." "The Supplies of Troops in War." "The Military Forces of the European States: Montenegro." "The Voice of a Master."

SPAIN.—*Revista Técnica de Infantería y Caballería.* Madrid: 1st December, 1909.—"The Marine Infantry." "The Evolution of Military Law in Modern Nations." "The Priest Pinto Palacios and the Captain Vicente Moreno." "The German Army" (*continued*). "The New German Cavalry Tactics." "Aviation in Our Army." 15th December.—"The Evolution of Military Law in Modern Nations" (*continued*). "Firing *Matériel* of the Regiment of Sicily." "The New German Cavalry Tactics" (*continued*). "Aviation in Our Army" (*continued*).

Revista Científico-Militar Bibliotéca Militar. Barcelona: 10th January, 1910.—"*Résumé* of the War." "The Grand Lesson." "Aeroplanes in War." 25th January.—"Lessons from the Riff War." "England, Portugal, and Spain." "Capacity, its Stimulus and its Determination." "Reforms in the German Cavalry." "Flies and Health."

SWITZERLAND.—*Revue Militaire Suisse.* Lausanne: January, 1910.—"The Cyclist Question." "The Manœuvres of the 2nd Division in 1909." The New Austrian Mountain Howitzer." "Firing against Balloons."

NOTICES OF BOOKS.

The Valor of Ignorance. By HOMER LEA. With 11 charts and portrait of Author in Frontispiece. Harper & Bros.

By far the most remarkable book on military policy which has been written in the English language in modern times is the "Valor of Ignorance." The author strives to arouse his fellow countrymen of the United States of America to realise the actual conditions of the life of a nation, and he attempts to convince them that the laws which history has proved to be constant in the evolution of states and empires, apply equally to them and to the rest of the world. His theory, stated briefly, is that all society rests on the basis of physical force by which alone *law* is respected and safety ensured. The manifestation of tribal energy, by which nations are created and maintained, is described by him as the quality of "*militancy.*" It is on the force of this impulse that the life of a nation must depend. When a nation has lost its militancy and its purpose of common action by force, when it is saturated by the vices of wealth and disintegrated by rampant individualism, its fall merely depends on the coming of a dangerous adversary. The present condition of the United States is denounced as resembling that of a man who lives to eat, who has no noble aspirations, and who has consequently become "vulgar, swinish and arrogant." The writer depicts in most eloquent language the shrinking of the world in a political and strategic sense, owing to the improvement in the mechanism of transportation and communication. America is no longer isolated in a military sense. Several hundred thousand soldiers could be thrown on the coasts of the Republic from either Europe or Japan in a month. The Pacific littoral is literally more accessible to the Japanese than to the American force in case of sudden war. The naval bases in the Ocean itself are quite indefensible by the great Republic, just at the time when the construction of the Panama Canal increases the risk of armed conflict with more than one Power. The rise of Canada and the prosperity of the growing Republics of South America are not included in the review of the American position, although the possibility of fresh and unsuspected rivals entering the field is mentioned. It is more especially the difficult situation into which his country is drifting with respect to Japan that the author presents for warning and reflection. Japan is warlike, poor, and organised in arms by land and sea. The United States is contemptuous of warlike virtues and qualities, is glutted with wealth, has neither army, navy nor framework for creating them on a scale to fight a military Empire. Her unreadiness and riches constitute a constant temptation to powerful and hungry neighbours, while her people are lapped in false security, engendered by boundless vanity and ignorance. But specific causes of quarrel are rapidly maturing, in addition, and the aggressive attitude of the unarmed American democracy towards well-armed rivals is likely at no distant date to precipitate a conflict.

After dealing with the general problem in burning sentences and searching arguments, the author describes with some detail the probable course of warlike operations in case of a breach with Japan, and in case the latter Power strives to establish herself on the American shore of the Pacific. It must be confessed that he gives his countrymen but little credit for their innate military qualities, for the stubborn valour which their raw troops displayed in the great Civil War, and for the comparative speed with which the American armies acquired discipline and military skill. He takes no count of the large number of Americans who have been educated at West Point, and who might be available to lead the national levies. He underrates the difficulties of an invader, and he says little of the gigantic resources for war which the United States would undoubtedly utilise at her leisure after the first shock of disaster. These points doubtless are intentionally ignored. It is Mr. Lea's mission to sound the tocsin of alarm, and many of his deductions are irrefutable. In England the book will be read with mixed feelings, for so much of the denunciation applies to this democracy also. Like America, money not militancy has become its ideal. The chief men in this country also are the most successful commercialists. The Navy is still well manned and splendidly equipped, but the Army, the force which essentially depends on the manhood of the country, or on a considerable proportion of it, rather than on money invested in costly battleships; the Army has fallen in value comparatively to other European armies to a most alarming extent. Our proximity to the Continental forces is juxtaposition itself compared with the distances separating America and Japan. We, too, are ruled by a thoughtless and ignorant electorate, which is too often swayed by party politicians, knowing and caring but little of the nation's future among the other States of Europe. Militancy, as defined by the author, is disregarded here, too. The pursuit of wealth engrosses our energies and lowers our standards of private and public ethics.

It is to be hoped that the "Valor of Ignorance" will be widely read in England, and that the necessity for honouring the profession of arms may once more be recognised. Fifty years is not a great space in the history of an Empire, and who can say whether the Imperial Republic or the ancient Monarchy of the English will be in existence fifty years hence. Their fate will probably depend on whether they recognise in time the necessity to arm, to honour the profession of arms, and, metaphorically, eat to live instead of living to eat.

The following gives a fair example of the author's style:—

"It is unnecessary to recall the battlefields upon which this republic was born or the subsequent wars that have marked its growth and expansion, other than to recall the invariability of that universal law governing the beginnings and rise of nations. This country, as others that have gone before, has been built up from the spoils of combat and conquest of defenceless tribes. Its expansion has been no more merciful nor merciless than the expansion of any other nation. The same inexorable law of physical strength has governed it as all others. The very ease with which this commonwealth has expanded is responsible for the erroneous beliefs now prevalent concerning the true basis of its future greatness. The people have come to look upon themelves in a false

though heroic manner, and upon other nations with the same indifference as they did the untutored savage whose sole defence was the solitude of his swamps and forests and a God that thundered in vain. This republic has forgotten that during the last few decades its relation to other countries has been completely altered, not only because the ripple of its expansion has by a law of national growth reached out to other portions of the earth, but that modern means of transportation and communication have reduced the whole world into a greater compactness than were the United States in 1830. . . . The time of this nation's youthful achievements is past. Yet proportionately as defenceless as were the peoples it has conquered the republic goes on heedless of its fate, complacently contemplating the restless shadow of vast armed forces to the east and west of it. In considering the future of this republic one must do so, not from the closets of its politicians, not from its alleyways with their frenzied crowds, not from theorists nor feminists, for these are but the feverish phantasms and sickly disorders of national life. It must be regarded from the heights of universal history and empirical knowledge which appertains to national existence. . . . When a man has no aspirations, no object to attain during life, but simply lives to eat, he excites our loathing and contempt. So when a country makes industrialism the end it becomes a glutton among nations, vulgar, swinish, arrogant. It is this purposeless gluttony, the outgrowth of national industry, that is commercialism. The difference between national industry and commercialism is that while industry is the labour of a people to supply the needs of mankind, commercialism utilises this industry for the gratification of individual avarice—a fungoid growth that is the product of industrial degeneration. Military or national development, on the other hand, is not only responsible for the formation of all nations on earth, but for their subsequent evolution and for the peace of mankind. When the opulence and unmartial qualities of one nation stand in inverse ratio to the poverty and military prowess of another, while their expansion is convergent, then results those inevitable wars wherein the commercial nation collapses and departs from the activities of mankind for ever."

The Royal Monmouthshire Militia. By Captain B. E. Sargeaunt, 12th Battalion The London Regiment. London: Royal United Service Institution: 1910.

The sudden extinction of the Militia would appear to have had at least one happy and unlooked-for result, in that it has induced those who served in the old Constitutional Force to exhume forgotten records, which far too long have been stored away upon the dusty shelves of Time, and compile therefrom histories of ancient and honourable corps. Such a work has now been produced by Captain Sargeaunt, the Assistant-Secretary of the Royal United Service Institution. Beginning with a brief account of the County of Monmouth, and of the different corps which at various times have been connected with it, the compiler goes on to tell us much that is historically interesting about the Militia in general, finally quoting the Act of formation of the Monmouthshire Militia in 1660, and describing in great detail the services which from that time onwards it has rendered

to the State. A work such as this is primarily, of course, of interest to those living in the County or to such as are or at any time have been connected with the Regiment; but Captain Sargeaunt has apparently been at very special pains to unearth many curious documents, ancient books, and official orders bearing upon Militia service in comparatively remote days, so that so comprehensive a book ought to attract more than a mere regimental circle of readers. We are reminded of the unparalleled services rendered by the Militia to the Line during the Napoleonic wars and at other times of trial—and we hope that the force which has taken its place will, on emergency, prove of equal value. The author again recalls to our recollection the fatuous conduct of some of our former Ministers, who having stumbled through a great war and seen peace declared, appeared at once to be obsessed by the conviction that wars had thereby ceased automatically and for ever, and that the Regulars might therefore at once be reduced, the Militia ignored, and their training neglected. It is good to be occasionally reminded of all we owe to the Militia, and Captain Sargeaunt has done well in here recording the two hundred and fifty years of the life of one of not the least distinguished of its regiments. The book is beautifully printed and got up, and is illustrated by really excellent photographs of old paintings and documents and inset cuts of curious weapons and accoutrements.

PRINCIPAL ADDITIONS TO LIBRARY, JANUARY, 1910.

The Regimental Records of the First Battalion The Royal Dublin Fusiliers, 1644-1842. By Colonel G. J. Harcourt. 8vo. 6s. (Presented.) (Hugh Rees, Ltd.) London, 1910.

L'Automobilisme au point de vue Militaire. By le Commandant Bornecque. 8vo. 2s. 8d. (R. Chapelot et Cie.) Paris, 1909.

Souvenirs d'un Mobile de la Sarthe, 33e Régiment Armée de la Loire 16e Corps. By D. Erard. 8vo. 3s. 7d. (Librarie de Saint-Denis.) Le Mans, 1909.

The Reality of War. An Introduction to Clausewitz. By Major Stewart L. Murray. With a Note by Spenser Wilkinson. 8vo. 2s. 6d. (Presented.) (Hugh Rees, Ltd.) London, 1909.

History of the War in Affghanistan from its Commencement to its Close. Edited by Charles Nash. Crown 8vo. 5s. (Thomas Brooks.) London, 1843.

A Short History of the 3rd (Queen's Own) Gurkha Rifles. By Lieut.-General H. D. Hutchinson, C.S.I. 8vo. (Presented.) (Hugh Rees, Ltd.) London, 1907.

La Vie Militaire du Maréchal Ney. By General H. Bonnal. Vol. I. 8vo. 8s. (R. Chapelot et Cie.) Paris, 1910.

Notes on the Life of Stonewall Jackson and on His Campaigning in Virginia, 1861-1863. By J. H. ANDERSON. 8vo. 3s. (Hugh Rees, Ltd.) London, 1905.

The Royal Monmouthshire Militia. By Captain B. E. SARGEAUNT. 4to. 42s. (Presented.) (Royal United Service Institution.) London, 1910.

Story of the Campaign in Eastern Virginia (from April, 1861, to May, 1863). By Colonel H. M. BRUNKER. 8vo. 5s. (Presented.) (Forster, Groom & Co., Ltd.) London, 1910.

Economic and Fiscal Facts and Fallacies. By Sir GUILFORD MOLESWORTH. Crown 8vo. 3s. 6d. (Longmans, Green & Co.) London, 1909.

RECENT PUBLICATIONS OF MILITARY INTEREST.

COMPILED BY THE GENERAL STAFF, WAR OFFICE.

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PREFATORY NOTE.

This Pamphlet will be issued quarterly, in April, July, October and January. Its purpose is to draw the attention of Officers to British and Foreign publications of Military interest which are likely to assist them in their professional work. Copies of the pamphlet will be distributed to the Headquarters of Commands, Educational Establishments, Units and Reference Libraries.

PART II.

SECTION I.

NOTE.—1. *When the price is not given in Part II., Section I., it is not known.*
2. *In Part II., Section I., books whose titles are given in foreign languages as well as in English are published in those languages, and are not translated.*

AERIAL NAVIGATION.

The Conquest of the Air. By Alphonse Berget. 295 pp., with numerous photographs and diagrams. 8vo. London, 1909. Heinemann. 12/6.

We owe Monsieur Berget a debt of thanks for having produced this translation of his French work. The extraordinary development which has taken place during the last eighteen months in the science and practice of aviation is hardly yet fully realised in England. The appearance of this book comes, therefore, at an opportune moment; and, while the author makes no claim for it to be a treatise on aeronautics, he describes clearly the bases of aerial navigation in its two actual forms.

Part I., which consists of 115 pages, deals with dirigible balloons, and shows how the modern form has been evolved. At present a dirigible can hope to cope with the wind and steer in any direction on an average of 300 days in the year. To increase this number to some 350 days, a considerable increase of horse-power, and consequently in weight, will be necessary; such, in the opinion of the author, must be the aim of future designers.

Part II. is devoted to aviation apparatus. The first three chapters explain the principles of aviation and their application in the construction of aeroplanes.

In subsequent chapters the essential differences between monoplanes and biplanes, as well as between the American and French schools of aviation, are clearly described.

The last chapter discusses the future of both forms of aerial navigation. The conclusion reached, so far as their military uses are concerned, is that their principal utility will be as scouts.

Anyone, however, who is interested in this subject should read the book for himself, and make his own deductions as regards the future of aviation.

Wright and Zeppelin (Wright und Zeppelin). By Rudolf Martin. 22 pp. 8vo. Berlin, 1909. Mickisch, Segler & Co. -/3.

The object of the author is to show that greater advantages must accrue to Germany from the inevitable progress in the science of aviation than to any other country. In fact, this science has come as a saviour to the Fatherland. Germany is strong on land, he continues, but weak on the sea. In future, however, no one in Germany need be afraid of defeat in war by either land or sea.

Martin then proceeds to weigh the various merits of the heavier and lighter than air flying machines. If war were to break out in five years' time, hundreds of giant airships and thousands of aeroplanes, he asserts, would move into the field on the German side.

Finally, Martin affirms that the greatest change that progress in aviation has brought about is the fact that England is no longer an island. He then endeavours to show how month by month a German invasion of England becomes more feasible, and how ill the British Navy would fare in a contest with the German airship fleet.

He sums up in conclusion by stating that Wright and Zeppelin are thus a guarantee of peace between England and Germany. Why this follows from what he has written is not explained.

ARTILLERY.

Austro-Hungarian Field Artillery Training Manual (Exerzier-Reglement für Feldkanonen- und Feldhaubitz Regimenter). Official. 109 pp., with 2 plates. 8vo. Vienna, 1909. k. u. k. Hof- und Staatsdruckerei. 1/11.

This is the first of the new training manuals which are appearing for the various arms in Austria-Hungary. It does not, however, exactly correspond with our "Field Artillery Training," in that all matters connected with fire discipline and the conduct of fire are dealt with in the "Schiessanleitung."* Further, gunnery questions, descriptions of telephone and means of communication, appear in the "Artillerieunterricht."*

In the present publication the plates give a clear description of the formations employed and also of the composition of ammunition columns.

There are only four formations for the battery: (*a*) Column of march; (*b*) Line—for movement in the fire-zone of the enemy—this formation is line of sections at full interval, the sections being in column of route; (*c*) Action in line—wagons on the left of the guns; (*d*) Line at close interval—similar to (*b*)—employed as a formation of assembly.

The various mounted parties employed with a battery are grouped as follows: (*a*) Subaltern officer (combining the duties of second-in-command and battery leader) with his orderly and trumpeter, battery commander's orderly and trumpeter, non-commissioned officer with director; (*b*) reconnoitring party, consisting of a subaltern officer, a sergeant-major and two corporals; (*c*) a subaltern officer, sergeant-major and corporal in charge of the limbers and wagons; (*d*) two telephonists. The remainder of the telephonists are not mounted.

The chapter headed "Gefecht" (Artillery in the Fight) has not yet been completed, and only deals at present with the work of reconnaissance.

The whistle is used to call attention to signals, which are always made with the sword. The trumpet is used to call attention to the appearance of cavalry.

Austro-Hungarian Instructions for Artillery Field Gun Fire (Schiessanleitung für Feldkanonen). Official. 99 pp., with numerous tables of examples. 8vo. Vienna, 1909. k. u. k. Hof- und Staatsdruckerei. 1/3.

This manual deals with subjects such as fire discipline and the conduct of fire, which in our Service appear in "Field Artillery Training"; it also includes the various instructions for the carrying out of practice. Though the publication is dated 1908, it has only been promulgated and taken into use this year, with the general introduction of the Q.F. gun.

The object of artillery fire is stated to be the endeavour to obtain effect, even if only moderate, at the earliest possible moment. "The methods employed must be suited to the practical conditions which often change rapidly."

As regards general methods, battery fire with long or short intervals is described as the "normal" method of fire. Storms of fire ("Feuerüberfälle") may be used at suitable moments, "searching" at fleeting targets, section control when portions of the target are widely separated.

Ranging is carried out with whichever projectile is to be used for effect; 100 metres is the normal "short" bracket, reduction of this only being made against targets such as shielded guns.

The correct length of fuse for fire effect is usually determined from the time-fuse ranging; fire for effect is afterwards carried on by six successive rounds at a time with the same elevation and fuse, until the elevation and fuse are found which give the best results.

Firing over one's own troops is allowed if they are more than 1,000 metres in front of the guns, or if they are not less than 500 metres from the target. The latter proviso may be modified if the troops are below the line of fire.

Firing at captive balloons is dealt with at some length; firing by night very shortly.

Numerous useful examples are appended giving typical methods of engaging different targets.

The book generally is written in simple style and is well arranged.

*For reviews, *see* below.

Austro-Hungarian Field Gun Manual (Artillerieunterricht, 8 cm. Feld kanone). Official. 341 pp., with diagrams. 8vo. Vienna, 1909. k. u. k. Hof- und Staatsdruckerei. 3/8.

This, the third of the new field artillery manuals recently published in Austria-Hungary, contains details as to the gun and wagon, the service of the gun, the use of accessories such as range-finding instrument, director and telephones, the equipment of horses and packing of carriages. The book is, in fact, a handbook for all field artillery matters not dealt with in the "Exersier-Reglement"* and "Schiessanleitung."*

The intricacies connected with laying out the line of fire and indirect laying are exhaustively discussed, the instrument used for obtaining the line being a combination of director and plotter.

Some thirty pages are devoted to the description of the telephone material and directions for use. Instructions for flag signalling follow, flag equipment being issued to all artillery units in addition to telephones.

The picture of the new observation ladder at the end of the book will probably be of interest.

A noteworthy point in regard to the equipment of the teams is the continued adherence to the method of collar-draught.

Breech-closing Mechanism of Guns (Geschützrohr Verschlüsse). By Korzen-Kühn. 124 pp., with diagrams. Vienna, 1909. Seidel. 4/1.

The publication of the Korzen-Kühn series of volumes, of which the present number is Part II.B, commenced in 1905. The series is divided into two portions —"general" and "particular." The first deals with the science of shooting, and describes the various component parts of artillery material. The second describes each type of weapon (including rifle and machine gun) separately.

The parts which have appeared to date are:—

General Series.—	I.	Science of Shooting.
	II.A	Guns.
	II.B	Breech-loading Mechanisms.
Particular Series.—	VII.	Small-arms.
	VIII.	Machine Guns.
	IX.	Mountain Guns.
	X.	Field Guns.
	XI.	Field Howitzers.
	XII.	Heavy Guns of the Field Army.
	XIII.A	Siege Guns.
	XIII.B	Fortress Guns.

Four parts of Series I. and one part of Series II. remain to be published.

The Field Artillery Officer's Pocket Book, 1909 (Taschenbuch für die Feldartillerie, 1909). By Major von Wernigk (German Army). 283 pp., with numerous sketches and diagrams. 12mo. Berlin, 1909. Mittler. 2/8.

The intention of this little annual, as stated in the preface, is to show how to apply the teaching of the German "Instructions for Field Artillery Practice." With this object in view, the greater part of the book is taken up with 21 examples of ranging a battery under a variety of circumstances. The examples consist generally of a series of "episodes," each of them giving rise to a fresh situation. The considerations determining the action of the battery or *Abteilung* commander are briefly discussed, and a solution of the problem is then given. The latter part of the book contains chapters on the duties of section and sub-section commanders in action, artillery entrenchments, and instructions for the guidance of artillery officers' patrols, orderlies, and ground scouts. The author, Major Wernigk, is well known as a writer of field artillery questions in Germany.

The Battery Commander (Der Batterie-Chef). By Major Szmula. 130 pp. 8vo. Berlin, 1908. Liebelschen Buchhandlung. 2/6.

A useful book giving many practical hints for a battery commander on the arrangements for training recruits and the battery generally; on the interior economy of the battery; and on practice.

The Gunner, Driver, or Gun Captain of the (German) Foot Artillery (Der Kanonier, Fahrer, und Geschütz-Führer der Fussartillerie). 8th edition. By von Biermann. 165 pp. 8vo. Berlin, 1909. Mittler. -/8.

This book, which is intended as a handbook for the rank and file of the foot artillery, is in two parts. Part I. gives general information about the German Army, the duties of the soldier, and similar points applicable to any arm of the Service. Part II. gives a summary of those portions of the foot artillery regulations dealing with drill and tactics, and some information as to the ammunition and stores carried for the various guns of the foot artillery. The book concludes with a history of the German foot artillery units, and a table showing their present distribution.

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*For reviews, *see* above.

BOOKS OF REFERENCE.

Handbook for Army and Fleet. (Vol. II.) Encyclopedia of the Science of War and Kindred Subjects (Handbuch für Heer und Flotte. (Band II.) Enzyklopädie der Kriegswissenschaften und verwandter Gebiete). By Lieutenant-General Georg von Alten. 904 pp., with numerous illustrations, plans and maps. 8vo. Berlin, 1909. Bong. 24/-.

This book is the second volume of an admirable and very complete encyclopedia on all matters relative to the art of war.

The wide range of this work may be gauged by the fact that the 904 pages of this volume only comprise the letters B to D (Bayreuth-Dampfseiler).

It is compiled by numerous officers, doctors, officials, scientists, and experts of all kinds, under the direction of the well-known General von Alten.

The excellent illustrations, plans and maps add greatly to the interest of this remarkable work.

From the Dora Baltea to the Ticino (Dalla Dora Baltea al Ticino). By Lieutenant-Colonel E. Caputo. 44 pp. 8vo. Turin, 1907. Olivero, 1/11.

A good study of the military topography of North-Western Lombardy. The portion of the Alps of which Monte Rosa is the centre is treated in considerable detail, while the information as to the roads and passes are interesting and valuable from the point of view of logistics.

The *Basutos*. By Sir Godfrey Lagden, K.C.M.G. Two volumes, with 70 illustrations and 9 maps. Hutchinson & Co. 1909. Price, 24/- net.

There are two reasons why Sir Godfrey Lagden's book is valuable. Firstly, because there is no one equally well qualified to write on the subject, for Sir Godfrey was one of the few officials selected to accompany the late Sir Marshal Clarke, when the Imperial Government, somewhat reluctantly, assumed responsibility for the country in 1884, and eventually succeeded him as Resident Commissioner from 1893 to 1902. Secondly, because it is desirable that their story should be told from the Basuto point of view, in view of the fact that Dr. Theal has, in his otherwise admirable history of South Africa, presented the case for their chief opponents, the people and Government of the Orange Free State. The consolidation of the Basuto people is one of the few examples of a nation formed by the individual genius of a Bantu chief, and is probably the only instance where the chief in question won the affection of his followers by justice and moderation. Moshesh, who to this day is the hero of the Basutos, was originally a minor chief whose mild rule, combined with his skill both as a warrior and a diplomatist, gradually increased the number of his followers and allies, until he was able, with some justice, to claim that his powers extended over the whole of Basutoland, as it exists to-day, and, in addition, over what was later the Orange Free State, as far west as Thaba 'Nchu.

Then came the voortrekkers and consequent border troubles, for those pioneers early recognised the agricultural value of the Caledon Valley.. A few years later the sovereignty of the Orange River was proclaimed, only to be abandoned by the Imperial Government in 1854. From that time until 1870, when the Basutos were only saved from complete defeat by the proclamation that their country was British territory, the story is one of ceaseless trouble on the border, and of a constant trouble, diplomatic as well as armed, between the Free State Government and Moshesh, who, and it can hardly be wondered at, was confused by the constant change of policy on the part of the Imperial Government, and as has been the habit of diplomatists before and since his day, intrigued first with one neighbour and then with another, and split verbal hairs, until his best friends accused him of being hopelessly untrustworthy. The truth was that, in spite of his undoubted genius, he had some of the failings of the Bantu, and his character is aptly summed up by the author in the following words: "While, therefore, Moshesh had his share of faults, consisting chiefly of the cunning order that baffled friend and foe alike, and savoured so much of insincerity . . . . it cannot be denied that his reign was characterised by statesmanship and repugnance to acts of barbarism. . . . Furthermore, his three acts of primitive legislation, erecting barriers against liquor drinking, witchcraft, and land alienation, are outstanding tributes to the forethought and wisdom he displayed."

Basutoland was administered by Cape Colony from 1871 to 1883, when the "Gun" War, consequent on the attempt to disarm the Basutos, having dragged on for nearly three years, at great expense to the Colony and without any appearance of termination, the Imperial Government was persuaded to administer the country directly.

Since that time progress has been continuous. There have only been three Resident Commissioners, of whom the third is still administering the country, and this continuity of aristocratic, paternal, and sympathetic government has contributed greatly to the success of an experiment which the Imperial Government undertook with some misgivings. The revenue has grown year by year, and amounted in 1907-8 to over £116,000, while the country has a balance at the bank of £150,000.

During the history of the Basutos they have fought with the white man on several occasions. In 1852 Sir George Cathcart invaded Basutoland and fought what was at best a doubtful battle, after which he withdrew, much to the relief of Moshesh, who nevertheless took care to send his messengers in all directions announcing that he had gained a great victory.

In 1858, and again from 1865 to 1868 there was war with the Orange Free State, in the first of which Moshesh gained an undoubted victory, while in the latter he was almost crushed, and his power would have been finally broken had not the High Commissioner intervened.

Finally, in 1880, the Cape Government decided to disarm the Basutos, and so brought on a war which lasted till 1883 without decisive result.

The Basutos were not finally and conclusively defeated on any of these occasions, and consequently their status is different to that of all other South African tribes, and they can hardly be blamed for a certain arrogance of demeanour and independence of attitude, because they imagine these results were due to their own prowess. They are not, like their hereditary enemies the Zulus, naturally warlike, and the author writes: "The majority of the Basutos, in spite of the common allegation that they revelled in war, disliked it then as they have always done, for they were not a pugnacious people."

But although not warlike by instinct, this knowledge that they have never been beaten may necessitate a different method of dealing with them in the event of trouble. A single isolated column, however sudden and swift its advance to the danger point, might not intimidate them, as would be the case with many Bantu tribes, but might rather precipitate a general rising.

Moreover, Basutoland would, in any case and with any enemy, be a difficult country in which to operate. Wagon roads are but few, and the majority of paths are narrow tracks, where an untrained mount can hardly keep his legs, and where a false step may mean destruction to horse and rider, but along which the Basutos on their wonderful ponies will ride, if not at full gallop, at least at a fast pace.

That the contingency of war may not arise must be the wish of all who have had the joy of travelling through their picturesque and fascinating country, and of knowing, however slightly, this loyal race of mountaineers.

Handbook of the Officers of the Swedish Army (Handbok rörande Svenska Armens Officerare). By Captain Falkman. 178 pp. 8vo. Stockholm, 1909. Norstedt. 2/10.

This is a useful book of reference for all that concerns officers of the Swedish Army.

Chapter I. contains some remarks on the general status and responsibilities of the officer. Chapter II. describes the methods by which officers are obtained. Chapter III. deals with the training and education of officers. Chapter IV. is devoted to the officers of the reserve. The remaining thirteen chapters are somewhat shorter, and give useful information on such subjects as orders of dress, equipment, armament, &c. The book concludes with four appendices, containing notes on articles of equipment, distinctions of rank, and a diagram showing graphically the periods of training undergone by the different classes of officers.

Veltzé's International Army Almanack (Veltzé's Internationaler Armee Almanach). Compiled by Major Alois Veltzé. 619 pp., with numerous illustrations. 8vo. Vienna and Leipzig, 1910. Stern.

The editor of this annual work of reference is a member of the Austro-Hungarian War Archives Staff. It is recommended as an extremely useful publication compressed within handy limits. As a whole the references are accurate and the information given well arranged.

Almanack of Military Literature (Almanach der Militär Literatur). By von Liman. 855 pp. 12mo. Leipzig, 1909. Engelmann. 6/-.

This book is a useful index to all contemporary German military literature. The first 123 pages contain an alphabetical register of military authors, with short biographical notes, and lists of their published works.

The next 500 pages consist of an index to books or magazine articles on military subjects, classified under 32 headings. The book concludes with a list of German and foreign military periodicals and an index to authors and subjects.

CAVALRY.

Austro-Hungarian Regulations for Cavalry Machine Gun Detachments (Anhang zum Exerzierreglement für die k. u. k. Kavallerie-Maschinengewehrabteilungen). Official. 8vo. 43 pp. Vienna, 1908. k. u. k. Hof- und Staatsdruckerei. -/6.

This machine gun supplement to the cavalry "Exersier-Reglement" was issued last year (1908).

The main principle connected with machine gun fire is stated to be a quick development of concentrated fire upon a limited zone of space. Machine guns should not be utilised in a continuous fire fight, but rather for short important phases of the same.

Against attacking cavalry, fire is to be directed first upon the whole front, then upon the bodies in rear. Artillery should only be engaged in flank. Machine guns are to be used singly only in exceptional cases.

Inasmuch as cavalry machine gun detachments in general are for the purpose of augmenting the fire power of cavalry and of facilitating the work of the latter, both mounted and on foot, it is held to be essential that they should be handled with the true "cavalry spirit."

Importance is assigned to a covered occupation of a position, whereby an unexpected opening of fire can be carried out, and in certain circumstances it is recognised that the ammunition, and possibly also the guns, may have to be unloaded from the pack-horses at some distance from the position and be carried thither by the detachments.

On the other hand, when the cavalry fight needs it, delay should not be incurred in seeking for cover, and general stress is laid upon the rapid movement and immediate readiness for action of all cavalry machine gun detachments.

The natures of fire used are of three kinds:—

1. Salvo.
2. "Individual fire" ("Einzelfeuer").
3. Single shots.

Salvos are limited to a specified number of rounds, generally 50, from each gun. "Individual fire," as it is termed, is the normal nature of fire; it is really "automatic" fire, and signifies that after the initial instructions, and subject to general directions, the gun is in the hands of its commander until the firing is stopped. Single shots are only used exceptionally to drive away patrols, reconnoitring parties, &c.

A cavalry machine gun detachment is composed of two sections, each of two machine guns carried on pack-horses. The usual formation adopted from column of march is "Geschlossene Linie," line at close interval. In this formation the four gun-horses are in line at 10 paces interval, with the three ammunition horses following, one behind another, their respective gun-horses. In action, "Feuerlinie," the guns normally open out to 25 paces interval.

The ammunition supply is under a sergeant-major; besides the three ammunition horses per gun, which follow the latter into action, there are two 6-horse wagons with a non-commissioned officer, which follow in rear of the whole.

The regulations lay down the employment of one range-finder per section, but in practice the ranges are usually estimated in cavalry sections.

FORTIFICATION AND MILITARY ENGINEERING.

Text Book of Fortification, Dealing with Engineer and Transmission Services and Fortress Warfare, used in the Royal War Schools (Leitfaden für den Unterricht in der Befestigungslehre im Pionierdienst, Verkehrswesen und im Festungskrieg auf den Königlichen Kriegsschulen). Official. 199 pp., with numerous diagrams and plans. 4to. Berlin, 1909. Mittler. 6/6.

This very comprehensive manual is divided into five parts and six appendices.

Part I. deals with transmission services, and includes railways, motor tractors, all means of transmitting information in the field, bridging, waterways and roads; Part II. with obstructions and demolitions, both in connection with roads, bridges, railways and telegraph lines, and with navigable waterways; Part III. with camps and bivouacs; Part IV. with field and permanent fortifications; and Part V. with the attack and defence of fortresses.

In the appendices useful tables are given, showing the number of entrenching tools carried by German units in the field, penetration of bullets and projectiles, carrying capacity of pontoons and pontoon bridges in the German Army, demolition stores carried in the field, &c.

The Coast Defences of Sea Powers other than Germany (Die Küstenbefestigungen der aussereutschen Seemächte). By Captain W. von Stavenhagen (retired). 88 pp., with 7 plans. 8vo. Berlin, 1909. Mittler. 3/-.

The author commences by giving a comparative statement of the strength of the Navies of the Great Powers dealt with, in tabular form. He then discusses the coast defences of the Powers under (1) *Great Sea Powers*, in which he includes Great Britain, the United States of America, France, Japan, Italy, Austro-Hungary and Russia, and (2) *Small Sea Powers*, in which he includes Norway, Sweden, Denmark, Holland, Spain, Portugal and Turkey in Europe.

The seven plans show the naval bases of Portsmouth, Dover, and Portland, the Thames and Medway defences, Copenhagen (2) and the Bosphorus.

The Study of Fortification (Le thème de fortification). By Captain Lenoble. 64 pp. 8vo. Paris, 1909. Chapelot. 1/3.

This short treatise is of interest to the engineer and to the infantryman alike, for it deals especially with such engineering work in the field as is likely to come within the cognisance of an infantry officer. The author holds that engineers, no less than cavalry and artillery, are auxiliaries of the infantry, and that the frequent use of such expressions as "the combined action of the *three* arms" has tended to keep the sapper in the background, and has prevented the realisation of the necessity for his action being in complete accord with tactical requirements. After discussing the utility of field fortifications under varying conditions, he goes closely into the

question of how the labour involved in their construction is to be divided between the infantry and the engineers.

There are two short appendices. The first deals with the trace and siting of entrenchments, and the provision of head-cover; the second with calculations for working parties, demolitions and bridging.

HISTORICAL.

The Seven Years' War (Der Siebenjährige Krieg). Compiled by the German General Staff. 233 pp., besides appendices, with 10 maps and sketches. 4to. Berlin, 1909. Mittler. 11/3.

This volume covers the period from 1756 to 1763. It is divided into three parts, A, B, and C. Part A is a review of the situation in the winter of 1757-58. Part B deals with the siege of Schweidnitz and the campaign in Moravia. Part C is a narrative of Duke Ferdinand of Brunswick's campaign in north-west Germany. The appendices contain orders of battle, march states, and casualty returns of the troops engaged.

Montcalm at the Battle of Carillon (*8th July*, 1758) (Montcalm au combat de Carillon). By Captain Maurice Sautai. 102 pp., with four maps and plans. 8vo. Paris, 1909. Chapelot. 2/6.

This work is issued by the historical section of the French General Staff, and is divided into three parts. The first describes the character of Montcalm, and deals with the military qualities of the soldiers he had under him. In the second chapter there is a description of the nature of the country in which the operations were carried out, and also of the events which preceded the battle of Carillon, while in the third chapter the battle is followed in detail.

Précis of the War in Switzerland (*1799*) (Précis de la guerre en Suisse, 1799). Papers of Colonel Marés. Introduction and notes by Edouard Gachot. 280 pp., and two maps. 8vo. Paris, 1909. Fournier. 5/3.

Of the wars undertaken by the Republican Armies of France, that which devastated Switzerland from March to December, 1799, must be considered among the most important. Colonel Marés' papers throw interesting light on this period. After a very distinguished career during the wars of the Revolution and of the Empire, and after having gained the esteem even of the great Napoleon, Colonel Marés received wounds at the battle of Austerlitz to which he succumbed in January of the following year. Apart from his soldierlike qualities, the author of these papers was also well known for his powers of writing. These papers, therefore, constitute a valuable literary addition to the annals of war and particularly to the history of Switzerland.

The Military History of Germany in the 19th Century. Part I. (Kriegsgeschichte Deutschlands im Neunzehnten Jahrhundert, Part I.). By Colmar Freiherr v. d. Goltz. 516 pp. 8vo. Berlin, 1909. Bondi. 11/6.

This volume deals with the Napoleonic era. The first chapter contains a review of the Prussian Army organisation and tactical training from the days of Frederick II. to the year 1806. The second chapter deals with the disasters of 1806 and 1807, concluding with the Treaty of Tilsit. The third chapter describes the measures taken to introduce reforms and to reconstruct the military system.

The fourth chapter, which is much the longest, embraces the whole period of the War of Liberation, including the campaign of Waterloo. The book contains numerous sketches illustrating the chief military events.

Memoirs and Studies of the History of the Prussian Army (Urkundliche Beiträge und Forschungen zur Geschichte des Preussischen Heeres). Published by the Historical Section of the German General Staff. 156 pp. 8vo. Berlin, 1909. Mittler. 4/-.

This volume deals with the historical records of the Prussian artillery from its reorganisation in 1809 to 1816. The first fifty pages deal with the changes of organisation and establishment of the artillery during the different stages of the War of Liberation, concluding with the final reorganisation in 1816. The remainder of the book consists of tables in which individual batteries are traced through their successive changes of title from 1809 up to the present day. The book should be of interest to students of military history.

Letters from the Peninsula, 1808-1812. By Lieutenant-General Sir William Warre, C.B. Edited by the Rev. E. Warre, D.D., C.B. 298 pp., with map and index. 8vo. London, 1909. Murray. 10/6.

This series of letters commences prior to the despatch of British troops to the assistance of the Spaniards in the Peninsula, and concludes shortly after the battle

of Salamanca. Though written without any idea of publication in the future, they give a simple and yet interesting description of the life of an officer on the staff during the greater portion of the war. Of special interest are those letters dealing with the characteristics of our allies and the reorganisation of the Portuguese Army, with which the writer served in the capacity of staff officer to Marshal Beresford. Owing to the scarcity of officers having a knowledge of Portuguese, the author's acquaintance with this language, acquired during childhood, was of special service to the Army at the commencement of the campaign and during the reorganisation mentioned above.

A short introduction to each chapter by the editor gives in outline the main features of each period of the campaign, and, together with a chronological table of events, assists in recalling the most important events to memory.

Historical Military Records (Memorie Storiche Militari). Published by the Historical Section of the Italian General Staff. In 2 parts. 8vo. Rome, 1909. 2/8.

These two pamphlets form part of the series of minor historical records now in process of publication by the Italian General Staff, which frequently fill up gaps in military history left by more ambitious works. The present series contains articles on Garibaldi at Talamone (1860), the meeting of King Victor Emanuel and Garibaldi in 1860, Victor Emanuel and General Cialdini, the operations near Venice in the autumn of 1796, the military attitude of the Italians towards Napoleon I., the Zambianchi expedition in May, 1860, and the battle of Maida (translation of an English article by Professor Oman).

Garibaldi and the Thousand. By G. M. Trevelyan. 370 pp., with 5 maps. 8vo. London, 1909. Longmans. 7/6.

This extremely interesting volume is the second of Mr. Trevelyan's series on the "Risorgimento" in Italy, and covers the period from Garibaldi's exile in 1849 to the taking of Palermo in 1860. Its chief value for military readers lies perhaps in its representation of the magnetic personality of that great leader of men, Garibaldi. It also gives an excellent account of two interesting military operations, Garibaldi's campaign in the Alps in 1859, and of the almost miraculous capture of Palermo, which was wrested from 21,000 Regular Neapolitan troops by Garibaldi and his heroic but ill-armed "Thousand," assisted by a number of practically unarmed and ill-disciplined peasants. The maps are clear and good, and the comprehensive bibliography should prove of great value to students of the Garibaldian epoch.

Cleburne and his Command. By Irving A. Buck. 382 pp., with illustrations. New York and Washington. 1908. The Neale Publishing Company.

Patrick Cleburne, the future Confederate general, came of an old Irish stock on both sides, and enlisted in the Forty-first Foot at the age of eighteen in disgust at his failure to pass a professional examination. He served with the regiment for three years, but as there seemed no prospects of it being ordered on foreign service, he bought his discharge, and in 1849 emigrated to America, finally settling at Helena, Arkansas. The outbreak of the Civil War found him a large landowner with a good legal practice and a man of considerable note in his adopted home, and he was chosen Colonel of the Fifteenth Arkansas Regiment. Within a few months he was promoted Brigadier-General, and at the end of 1862 Major-General. He would probably have succeeded to the command of Hardee's Corps if he had not during the winter of 1863-4 advocated the enlistment of negro troops—a step eventually adopted by the Confederate Government when it was too late. Had he been in command of that corps in November, 1864, it is not likely that Schofield's army would have been allowed to escape at Spring Hill. There would then have been no battle of Franklin (where Cleburne fell), and Hood's invasion of Tennessee might have had a very different issue.

Cleburn won the proud title of the "Stonewall of the West" by his remarkable personal courage; "men seemed to be afraid to be afraid where he was." He was certainly one of the ablest tacticians in the Army of the West, and unsurpassed as a division commander. That no leader could strike a more staggering blow was proved at Murfreesborough, and his splendid stand at Ringgold, which earned him the thanks of Congress, saved Bragg's army from utter destruction after the rout on Missionary Ridge.

The writer served as A.A.G. in Cleburne's division, and displays unbounded enthusiasm for his great commander. The descriptions of the various battles are somewhat unsatisfactory, because the author confines himself to narrating the part taken in them by Cleburne's division only. Thus the account of the Chickamauga campaign leaves a great deal untold, which is nevertheless essential to a proper appreciation of the military operations.

In spite, however, of defects of style, this work will serve to keep green the memory of one of the most remarkable soldiers of the Civil War, and can be cordially recommended to the attention of the military student.

The Story of a Cannoneer under Stonewall Jackson. By Edward A. Moore. 315 pp. with portraits, and introductions by Captain Robert E. Lee, Jr., and Hon. Henry St. George Tucker. New York and Washington. 1907. The Neale Publishing Company. 8/4.

This work is of considerable interest not only as a narrative of the personal experiences of a Confederate gunner who served in that rank throughout the war, but

also as a record of the part played during the war by the Rockbridge Artillery. This famous battery "fired the first shot from a Confederate gun in the Shenandoah Valley." One of its earliest commanders was the Rev. W. N. Pendleton, afterwards Lee's chief of artillery. It was originally attached to the Stonewall Brigade, and formed a component part of it up to Sharpsburg. Upon the reorganisation of the artillery after that campaign it was assigned to the First Regiment Virginia Artillery, and continued with the Army of Northern Virginia till Appomattox. It lost one gun at Kernstown, and all its four guns were captured at Deep Bottom in the summer of 1864, but the battery was immediately re-armed.

The book is full of good stories of the experiences of the author and his comrades, but preserves a discreet silence upon questions of strategy and tactics, whilst it contains little that is new about Stonewall Jackson himself. On certain points the writer seems to be in error. His account of the Valley campaign conveys the impression —perhaps unintentionally—that the bulk of Banks' army was at Winchester on the morning of the 23rd May, 1862, whereas the main body was posted at Strasburg. On page 191, in writing of the second day of Gettysburg, he confuses Rodes' and Early's divisions. On page 288 he speaks of the Federal General, Gregg, as captured on the morning of the surrender at Appomattox. But Gregg was taken prisoner near Farmville two days earlier.

Major-General J. E. B. Stuart. By Theodore S. Garnett. 61 pp. New York and Washington. 1907. The Neale Publishing Company. 4/-.

This address was delivered on the 30th May, 1907, on the occasion of the unveiling of the equestrian statue of General Stuart in Richmond. The orator, Judge Garnett, served during the Civil War as Stuart's aide-de-camp, and his address is naturally an enthusiastic eulogy of his great leader. He considers that Stuart attained the climax of his career on the second day of Chancellorsville, when he was appointed to the temporary command of Jackson's corps, and he quotes General Alexander in support of the view that Stuart on the reorganisation of the Army of Northern Virginia should have been Jackson's successor. He takes some pains to clear Stuart of the responsibility of the failure of the Gettysburg campaign, but ignores the fact that Lee's consent to the movement round Hooker's rear was conditional upon Stuart's ability to cross the Potomac in advance of Hooker. The account given of Stuart's fall at Yellow Tavern differs considerably from that given by Colonel Gus Dorsey in the Southern Historical Society Papers, Vol. XXX.

Appendices to the Italian Official Account of the 1866 Campaign in Italy (Complemento alla Storia della Campagna del 1866 in Italia). Vol. I. 123 pp. Vol. II. 219 pp. 8vo. Rome, 1909. Laziale. 2 vols. 3/9.

The two volumes of the Italian official account were published in 1875 and 1895 respectively. The conclusion of the campaign was followed by such acrimonious disputes on the subject of the conduct of General La Marmora that it was considered judicious to allow twenty years to elapse between the publication of the first and second volumes of the Official History; similar reasons have retarded the publication of these appendices. In the first volume the constitution of the supreme command and the plan of operations are discussed, while the political preparation for war and the effect of various naval and political influences are considered. The second volume is largely taken up with General La Marmora's report to the War Office on his conduct of the operations and with the orders given before the battle of Custoza. The various reports and orders given throw considerable light on various episodes in the campaign that had hitherto remained obscure, and differ considerably from the accounts given in previous books and pamphlets on the subject.

Official History of the Russo-Japanese War. Part III. Siege of Port Arthur. (Prepared by the Historical Section of the Committee of Imperial Defence.) 4/6.

The present volume deals with the siege of Port Arthur from the battle of Nan Shan to the fall of the fortress.

In a short introductory chapter, the history of Port Arthur as a modern fortress and naval base is briefly described. This is followed by an account of the operations culminating in the capture of the so-called "Position of the Passes" and the commencement of the siege. The next four chapters deal with the organisation of the 3rd Army as a siege force, and with the three general assaults.

It is, perhaps, open to argument whether any of these attempts was justified in the conditions under which they were made; but the evidence as to the necessity of making the first attempt would appear to exonerate the Japanese from the charge of headstrong folly with which they are sometimes charged.

Subsequent chapters are devoted to the assault and capture of 203 Metre Hill and to the different attacks on the permanent forts of the north-east front which led finally to the surrender of the fortress after eight months' siege. The descriptions of the Japanese assaults and of the conflicts waged by the opposing forces, when actually within the forts themselves, and often far below ground level, give a remarkable indication of what we must be prepared for in the future, should we at any time find ourselves opposed by troops trained and disciplined to an equal power of endurance.

A Scamper through the Far East. By Major H. H. Austin, C.M.G., D.S.O., R.E. 322 pp., with 30 illustrations and 2 maps. 8vo. London, 1909. Arnold. 15/-.

The author gives an entertaining and instructive account of a rapid journey from England to the Far East and thence to Simla. The topographical details given by

him of the Manchurian battlefields which he visited are full of interest. Many useful hints on travel in Japan are contained in the chapters in which the author describes his walking tours in the Japanese highlands off the beaten track of European travellers. Chapter XIV. contains a brief and graphic sketch of the Japanese Grand Manœuvres at Nara. The whole account of the journey demonstrates how much can be accomplished in a limited time, provided plans are carefully made beforehand.

Life of Major-General Sir John Ardagh. By his Wife, Susan, Countess of Malmesbury. 453 pp., with index. 8vo. London, 1909. Murray. 15/-.

For over 40 years the subject of this memoir served his country in a variety of capacities which no soldier among his contemporaries could rival. For 31 years his services were in constant demand by the Foreign Office, the Colonial Office, and the Treasury as confidential expert adviser. His record is certainly one of the most remarkable in the annals of the military and diplomatic history of our generation. During the latter years of his life he had almost become an *ex officio* member of any congress or conference in which Great Britain was concerned.

Such a career deserved to be rescued from oblivion, and this has been most happily done for us in the very interesting memoir which Lady Malmesbury has produced.

MEDICAL.

The Strategical and Tactical Employment of the Medical Service, as carried out in an Army Corps (Der operative und taktische Sanitätedienst im Rahmen des Korps). By Maximilian Ritter von Hoen. Translated by Lieutenant-Colonel W. G. Macpherson, C.M.G., R.A.M.C. 137 pp. with 4 maps and 6 sketches. 8vo. London, 1909. H.M.'s Stationery Office. 4/6. (*Published by permission of Mr. Josef Safár, Vienna.*)

The author of this work is an officer of the General Staff in the Austro-Hungarian War Office, and is also a lecturer at the Army Medical College, Vienna. The first part of the volume deals with the theory of the Strategical and Tactical Employment of the Medical Service, and discusses the principles upon which directors of medical services, administrative medical officers of divisions, officers commanding field ambulances, and medical officers with regimental units should handle and utilise the medical resources under their control during different phases in military operations. The second part contains a series of fourteen problems showing the practical application of the principles to definite military situations, such as the medical arrangements required in billeting areas on strategical concentration and during an advance, preparations for anticipated conflict with the enemy, for battle, for care of wounded after a battle, for evacuation by road and by railway, and other possible situations affecting the movement of sick and wounded. The work is essentially technical and is based entirely upon the Austro-Hungarian field medical organization, but the general principles indicate the kind of effort that must be made in all armies to deal satisfactorily with masses of sick and wounded and remove them with a minimum of interruption and confusion to the hospitals, where they can be permanently treated. An introduction by the translator explains the main features of the Austro-Hungarian organisation, and thus enables the reader to follow the points in the rest of the volume.

Instructions for the use of the Army Field Röntgen Ray Wagon (Feldröntgenwagen-Vorschrift). Official. 244 pp., with 39 plates. 8vo. Berlin, 1909. Mittler. 2/10.

This volume of instructions has been issued by the German War Office, and gives a very full description of the latest pattern of the German Army mobile X-Ray outfit for use in the field. The book contains four chapters. The first deals with the actual wagon and its accessories and the equipment required to produce the X-Rays, take the picture, develop it and make prints. The directions for packing each article are minutely given. The wagon is a four-horsed one, and weighs, empty, 1,683 lbs., and when fully loaded, 3,908 lbs. The wagon carries a benzine motor and dynamo to furnish the electric current. These are permanently fixed in the wagon, and a cable is supplied to convey the current to any required spot.

The second chapter enters minutely into the working of the motor, its care, causes of failure, &c. Sufficient benzine is carried to run the motor for 23 hours. Instructions are also given as to how a room should be arranged, and where the apparatus is to be placed before commencing work, as, also, how to exclude daylight when screening is to be done. A great deal of space is devoted to instructions as to the best method of obtaining negatives of each separate area of the body. The development of plates and preparation of prints are fully described. Specimens of all army forms connected with the work are given.

The third chapter deals with mobilisation. It gives a list of the articles which deteriorate and the time after which they must be replaced; also a list of the articles to be drawn from stores.

The fourth chapter lays down that at least once a year the apparatus is to be thoroughly cleaned and tested in the open air, otherwise it is not to be used in peace time.

The *personnel* is: one mounted non-commissioned officer of the medical service, one lance-corporal, one mechanic, and two drivers from the "train."

Austro-Hungarian Army Regulations for the Conveyance of Sick and Wounded by Rail (Vorschrift für Sanitätszüge des k. u. k. Heeres.) Official. 197 pp., 7 plates, with drawings in text and tables. 8vo. Vienna, 1909. k. u. k. Hof- und Staatsdruckerei. 1/10.

This work is the official manual of hospital trains for the Austro-Hungarian Army; it consists of two main divisions with numerous plates, drawings, and tables. The first division is devoted to "Spitalzüge," which we would call hospital trains. This class of train is fitted up as a travelling hospital capable of supplying all the needs of 144 seriously sick or wounded patients lying down, during a journey of several days if necessary, while being transferred from the area of operations to the hospitals in the home territory. These trains are composed of specially constructed goods wagons which are employed for traffic during peace time, but are not allowed to be sent out of the country.

The second division deals with "Krankenzüge," *i.e.*, ambulance trains of an improvised nature and primarily intended to carry sick and wounded short distances, and only to afford such medical attendance as may be absolutely necessary during the journey. These trains may be permanent or temporary, and are made up of ordinary goods wagons.

Each army corps has three of the permanent type of improvised ambulance trains, in which the wagons are fitted with some apparatus to support stretchers, and with sitting accommodation. The temporary type of train is made up as required of additional goods wagons with improvised accommodation, when a very large number of cases have to be evacuated rapidly.

In the case of both kinds of train, the directions given enter minutely into every detail concerned with the formation, adaptation, equipment and *personnel*.

The duties of everyone on the train, from the commandant downwards, are clearly laid down, and all probable contingencies are provided for. The work affords an excellent guide to those who may in any way be concerned with the formation of a hospital train.

Further Preliminary Reports on Flies as Carriers of Infection. (Reports to the Local Government Board on Public Health and Medical Subjects. New Series No. 16.) 41 pp. 8vo. 1909. London, H.M.'s Stationery Office. -/3.

The conclusions drawn by the authors of these reports, of which there are four, are of much importance in a military sense, and should be widely known throughout the Army. They are to the effect that the evidence incriminating house flies as carriers of disease, especially of cholera and typhoid fever, is conclusive. The fly causes *relatively gross infection* (the italics are in the original) of any food upon which it alights after having fed upon infective substances. "The excrement voided by a single fly may contain a greater quantity of the infective agents than, for example, a sample of infected water. In potential possibilities the droppings of one fly may, in certain circumstances, weigh in the balance as against buckets of water or of milk."

Mosquito or Man? The Conquest of the Tropical World. By Sir Rubert Boyce. 260 pp., with 44 illustrations. 8vo. London, 1909. Murray. 10/6.

This book contains eighteen chapters and two appendices well illustrated with photogravures. The author deals with the history of tropical medicine and the theories which were formerly held as to the causation and spread of cholera, malaria and yellow fever. He then traces the discovery of the actual path of infection and the means of combating the above diseases, as also sleeping sickness, ankylostomiasis, Malta fever, and more briefly plague, tick fever, leprosy and tuberculosis.

This work gives an excellent summary in an interesting form of all that is known at present of tropical medicine and sanitation.

The first portion of the appendix gives the anti-mosquito legislation adopted by various Colonies. The second portion contains a list of expeditions sent to investigate tropical diseases.

Social Diseases and their Prevention. By H. N. Robson. 104 pp. 8vo. London, 1909. Simpkin, Marshall, Hamilton, Kent & Co.

This book is written in popular language with the idea of clearing the air in regard to the attitude of this country towards measures for the prevention of venereal diseases. It recognises the difficulties and defects of preventive legislation, and is written with a view of indicating how these may be overcome, and venereal disease effectively prevented by personal measures, on the lines laid down by the scientific investigations in recent years by Metschnikoff and others. The author forcibly describes how moral prophylactic measures have failed to arrest the spread of venereal diseases and the consequent infection of the innocent. He considers that it is immoral to check the means of fighting the evil. He refers to the steps taken to put Metschnikoff's researches into practical use in Continental Armies. The volume is a strong indictment of what he calls the *laissez-faire* attitude of Great Britain and America in the matter, and the "cold, callous puritanism of the middle classes."

ORGANIZATION AND ADMINISTRATION.

Pocket Book for the Train and Supply Officer in the Field and at Manœuvres (Taschenbuch für den Train und Verpflegungsoffizier im Felde und im Manöver). By Lieutenant C. Hummel. 134 pp., with diagrams and sketch maps in the text. 8vo. Berlin, 1910. Mittler. 2/6.

A most useful little book containing everything the train and supply officer requires to know as regards organization, lines of communication, orders, supply, and reconnaissance. The last chapter but one is devoted to a supply problem in the field.

Paragraph 42 is of interest; it deals with the treatment of hostile inhabitants, and reads thus:—

"*Punishments for Hostile Inhabitants.*

"Towns or villages lying on the line of march are to be held responsible for any casualties to *personnel* or injuries to material brought about or committed by hostile inhabitants in their neighbourhood, only the infliction of severe punishment to life and property will induce the authorities and landowners to take action against their own countrymen. Bridges which have been demolished are to be restored by the local authorities under threat of punishment, and obstacles and barricades are to be removed.

"Buildings from which armed inhabitants have fired, or which have served as places of concealment for partisans are to be burnt; every endeavour is to be made to guard against such a fire being put out.

"All hostile citizens found *in flagrante delicto* with arms in their hands have forfeited their lives according to the law of war, and are consequently to be shot without mercy."

A Line of Communication Officer's Vade-mecum (Aide-mémoire de l'officier des étapes). By Major Wattelier. 168 pp. 8vo. Paris, 1909. Chapelot. 1/2.

This volume forms a handy and complete book of reference for officers doing duty on the lines of communication. Its contents include a summary of the general organisation of the communications, a full detail of such duties as are common to all section and post commanders, and finally the special work which is to be carried out by officers holding such appointments as commandants at railheads, posts on navigable waterways, advance depots, &c. The establishment of magazines, the collection and distribution of food and forage, dispositions for local security, the safe passage of convoys, and the maintenance of communication are all fully discussed, and a carefully compiled index facilitates reference. Two appendices deal respectively with prisoners of war and the utilisation of the services of civilian ambulance societies.

The Provisioning of the Modern Army in the Field. By Brigadier-General H. G. Sharpe, United States Army. Second revised edition by Captain F. A. Cook, Commissary United States Army. 98 pp. 8vo. Kansas City, Mo., 1909. Franklin Hudson Publishing Co. 6/-.

The author begins by giving the views of various military writers on the provisioning of an army in the field, as well as the results of past experience in this respect.

The general system of supply adopted for modern armies is then described, and the importance of making a careful study in time of peace of the resources of likely theatres of war is emphasised.

Instances of supply problems which have occurred in past campaigns are given in the appendices, and a sample problem is worked out.

POLITICAL.

Imperial Unity. By Viscount Milner, G.C.B., D.C.L. 93 pp. 8vo. London, 1909. Hodder and Stoughton. 2/6.

This little book contains the speeches delivered by Lord Milner in Canada during his visit to the Dominion in the autumn of 1908. To use Lord Milner's own words, the "speeches deal with various aspects of what, for want of a better word, is called 'Imperialism.'" The reflections on the future relations of the self-governing Dominions to the United Kingdom will be studied with interest by those to whom the consolidation of the British Empire is a great and absorbing ideal.

Lord Milner dwells upon what he terms the privileges of British citizenship, and he sees no danger in the distinct "types of civilisation and character" which are developing in the Dominions. He is of opinion, moreover, that the birth of what may be called local patriotism is by no means necessarily antagonistic to the growth of that wider patriotism which is Imperial.

The speech on South African development, delivered at the Canadian Club, Ottawa, on the 31st October, 1908, gives in a short space much useful information regarding those great portions of the Empire whose unification is almost complete.

Britain at Bay. By Spencer Wilkinson. 192 pp. 8vo. London, 1909. Constable. 6/-.

This book is written with the object of awakening throughout the country the sense of patriotism which the author states is dormant but not dead. The means by which he essays to effect this is by presenting a vivid picture of the immediate effect of war on the trade and industries of Great Britain, and the after effect, if such a war should end in defeat. He considers that war, followed by defeat, is by no means a remote contingency, in view of our present state of unpreparedness when compared with that of Germany.

Mr. Wilkinson affirms that, owing to the long period during which the horrors of war have not been brought home to the nation, individuals have directed every effort to the accumulation of wealth and to the enjoyment of luxuries, with the result that the welfare of the nation as a whole has been neglected and allowed to take a secondary position.

He states that "the future of England depends entirely upon the restoration of duty, of which the nation is the symbol, to its proper place in our lives," and when this is accomplished, the nation will demand some form of national service as the least expensive and most efficient system of insurance against all eventualities. He presents, and discusses in some detail, a scheme by which, at a small increase of cost, we should have a homogeneous short-service Army of one million and a-half, as well as 45,000 troops voluntarily enlisted for garrison abroad, instead of a heterogeneous force of 589,000 men.

However much opinions may differ as to the merits of the scheme advocated, this clearly-expressed plea for a careful consideration of our national position and obligations cannot fail to command attention.

1912? Germany and Sea Power. By A. R. Colquhoun. 119 pp. 8vo. London, 1909. Pitman. 1/-.

This book consists of a reprint of ten articles which have appeared in the *Morning Post* and various periodicals during the year 1909, discussing the political and economic condition of Germany at the present time, and comparing it with that of Germany during the last half of the 19th century and of Great Britain.

Without going into very great detail, the author describes the expansion of trade in Germany, and points out how naval ambition has been created and fostered in that country mainly through the exertions of the German Navy League. He then describes the composition of the German fleet, its growth, and the programme of construction up to and including 1917.

Mr. Colquhoun then considers in some detail the political condition of Europe, and shows how the present close alliance between Austria and Germany is likely to affect the naval situation. The Pan-German and Pan-Slav movements are discussed in some detail, and we are informed that, in consequence of the antagonism of the two, the ideal of the former holds out by no means so serious a threat as some have imagined.

Tariff Reform, the author states, is the only means by which we can ensure sufficient revenue to maintain a strong Navy without reducing the capital of the nation, and the adoption of a protective policy necessitates a complete system of national defence, because in carrying it out we may have to run counter to other Powers, and thus encounter their active opposition.

In the author's opinion "the danger is imminent," and the remedy is "an Imperial Navy, and behind it universal military service."

Although opinions may differ with regard to the author's conclusions, the facts and figures quoted deserve careful study, and this clear exposition of one side of the question merits attention.

Rome and Germany. The Plot for the Downfall of Great Britain. By "Watchman." 376 pp. 8vo. London. Diane. 2/6.

The book is remarkable on account of the conception of the idea that the plot for the downfall of the British Empire has been hatched by the Vatican, owing to the desire to break the power of the one State which Rome has ever held to be the prop and mainstay of Protestantism, and further, that Germany has been selected as the tool of Rome for this purpose.

The opening chapter deals with the social and political designs of the Roman Catholic Church against Great Britain dating back to the days of Elizabeth. The South African War is attributed to religious intrigue on the part of Rome, and, further, the anti-British press campaign waged on the Continent during the war was, according to the author, entirely due to this agency. In this connection he says:—

"From the commencement and throughout the Boer War, Rome sought, by a campaign of lies and calumnies, which was carried on by every Continental nation, to engender hatred of Britain and thereby induce the rest of Europe to form a hostile coalition against her."

The German alliance with Rome, shown by the power of the clerical party in the Reichstag, is proved, according to the author, by the fact that the Kaiser, with the approval and satisfaction of the Pope, nominated a German as the new General of the Jesuits, when the post fell vacant some two years ago.

A chapter is devoted to German plans of invasion, but the statements set forth, which are chiefly supported by references to the Press, are not very convincing.

Part III. of the book is devoted to the Jesuit influence in Great Britain at the present day, and the author asks us to note that this influence is being exerted through the Socialists and Anarchists in this country.

Germany and world-politics in 1908 (Deutschland und die grosse Politik anno 1908). By Dr. Schiemann. 409 pp., with index. 4to. Berlin, 1909. Reimer. Unbound 6/-. Bound 7/-.

This is a volume of weekly reviews dealing with political events between January and December, 1908. At the head of each week's retrospect is a brief summary of events with dates. The discussion which follows is not, however, confined to the events thus recorded.

Professor Schiemann, whose connection with the *Kreuz-Zeitung* (the Conservative organ of the Prussian Junkers) is well known, deals with the following international questions amongst others: The Anglo-Japanese Alliance, Count Okuma's much-discussed speech regarding India, the "White Australia" movement, Anglo-American relations, the Fakumm Railway dispute, France's activity in Morocco, Near Eastern affairs, &c.

He also discusses the internal affairs of England, Persia, Portugal, and Russia; the last named are constantly and very fully considered. He touches upon Asiatic immigration into British Colonies, the attitude of Egypt towards British control, &c.

A large portion of the volume is taken up by newspaper polemics, the Pearson and Northcliffe Press, the *Times*, the *Temps*, and *Novoe Vremya* being attacked with special vehemence.

He writes bitterly against France's policy in Morocco, and is hostile to the Anglo-Japanese Alliance.

Optimism regarding Germany's future is a marked characteristic of the book. On page 170 the author writes: "Time and the mistaken policy of our opponents work for us, as does also our good conscience, a factor which must not be underrated in politics."

He exults over the "nemesis" which, by means of an "irrevocable" constitution, has placed political power in South Africa in the hands of the Dutch. "The tree of British Imperialism" will, according to him, "never grow to the skies." He prophesies grave troubles for Great Britain in the future, and is inclined to exult over the difficulties existing and anticipated. Nevertheless, he acknowledges that our rule has conferred great benefits upon India.

Many of the questions discussed in the work have been settled, and its chief interest lies in the fact that it represents most political matters from a point of view absolutely opposite to that from which the majority of patriotic Englishmen regard them.

What would Bismarck say on the subject of the German Fleet, and England-Germany (Was würde Bismarck sagen: zur deutschen Flotte, zu England-Deutschland). By Graf Ernst zu Reventlow. 119 pp. 8vo. Berlin, 1909. Meinecke. 2/-.

The object of the work is the justification of the present increase in the German fleet. The author sets himself to overcome the arguments in favour of those influences which oppose, or tend to oppose, the further progress in the growth of the Navy by applying the policy of Bismarck.

He turns first to a speech by Bismarck, in which he said that Germany belonged to what Metternich called the "satiated States," that is, that there was nothing abroad that could be appropriated by war, their only aim being to ensure their own national freedom and unity, and thereby peace. Also to another in which Bismarck prophesies that "the war of the future will be an economic war, the war for existence in general." From these speeches and others the author endeavours to demonstrate the necessity and object of the new naval programme, which he declares is essential to the existence of Germany as a trading Power. He applies several important points in Bismarck's policy to that of the present day, crediting him with having put his finger on the real cause of the Anglo-German relations when he pronounced it trade jealousy.

These relations are further discussed under two headings, viz.: "What did Bismarck think of England?" and "Bismarck and the Heligoland Transaction." These are supplemented under the heading, "The German Fleet in Foreign Politics." Here he deals with international politics in so far as concerns England, France, and Russia, and declares the *entente cordiale* to have been the result of the German naval policy, and the Franco-Russian understanding the outcome of Germany's refusal to renew the neutrality treaty with Russia. He asserts that an understanding on armaments is impossible; the only reason for such would be the cost of the fleet, which, by previous arguments, he holds to be to the advantage of the people to bear. He sums up the position by saying the only way to abolish the present antipathy is for England to extend to other nations her own conception of freedom which is so dear to every Englishman. He concludes by a quotation from Bismarck, which, the author says, also holds good for the fleet to-day: "I consider the growth of the German forces, both offensive and defensive, to be an essential element of peace."

The Peoples of South-Eastern Europe and their Political Problems (Die Völker Südosteuropas und ihre politischen Probleme). By P. Dehn. 98 pp., with a coloured map. Halle on the Saal, 1909. Gebauer-Schwetschke Druckerei. 2/6.

In this book the author first of all describes the various races which inhabit South-Eastern Europe, and then considers their position, aims and aspirations. He points out that most of the nationalities are dissatisfied with existing limits of territory or power, and that they either desire independence or, where they have independence, an expansion of territory or conjoint grouping. It is, however, difficult to reconcile

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the different demands, and in point of fact the "struggle of all against all has only hitherto been held back by pressure from the Powers."

Herr Dehn adopts the following race-grouping:—

(*a*) North Slavs—Czechs, Slovaks, Poles and Ruthenes.
(*b*) South Slavs—Bulgars, Serbo-Croats and Slovenes.
(*c*) Non-Slavs—Magyars, Roumanians, Turks, Greeks and Albanians.

He considers that among these races the people the least entitled to their demands are the Czechs. In this respect, however, the author writes perhaps from a somewhat partial point of view, for he regards their aspirations mainly in the light of the effect which, if granted, they might have on "German" development.

The later chapters deal with the new Pans-Slavism, "a Balkan confederacy," the Austrian Monarchy as a Slav force, the Eastern Crisis in 1908-1909, the future of Turkey and the position of the Powers.

South Africa, from the Great Trek to the Union. By F. R. Cana, F.R.G.S. 340 pp. 8vo. London, 1909. Chapman & Hall. 10/6.

In his preface, Mr. Cana writes: "The aim of this book is to give a clear and comprehensive political history of South Africa from the period of the Great Trek, when its administrative unity was first lost, until the re-establishment of that unity (1909) by the passing of the Act transforming the self-governing Colonies into one State." Since the question of closer union of South Africa has come into prominence, many books on this subject have been produced, of which Mr. Cana's is not the least important. He traces with painstaking impartiality the various movements that have in the past seventy years been directed towards unification or federation, and indicates wherein the chances of success or the germs of failure lay. Those who would study the reason of the apparently phenomenal rapidity and smoothness with which unification has finally been achieved, will learn from this book that the necessity for it has long been foreseen, and that diverse factors have been acting towards this end for many years.

It is a political rather than a military history of South Africa, and is, moreover, essentially the history of a particular political movement, namely, the closer union of great States; but Mr Cana's readers will assuredly also be helped "more readily to understand the problems involved in the future development of the land."

America and the Far Eastern Question. By Thomas F. Millard. 576 pp., with appendices, 2 maps and numerous illustrations. 8vo. New York, 1909. Moffat, Yard & Co. 16/8.

The author commences with a brief general outline of the present situation in the Far East and the relationship of the various interested Powers to each other, and gives his opinion that "Japan is now the most virile disturbing factor."

With this as a starting point the author proceeds to investigate at length Japan's economic and political *régime*, both internal and external, dwelling more particularly on Japan's dealings in respect of Manchuria and Korea.

One of the leading features in connection with Japan's economic *régime*, as described, is the active financial support given by the Government in developing her commercial undertakings, and a full analysis of the various methods employed is given.

In regard to Japan's exploitation of Korea and Manchuria, the author's comments are in the nature of an *exposé* of alleged Japanese methods, as a result of which the author attributes the cause of a growing suspicion and resentment in the West.

As regards Korea, he sums up the condition in that country as deplorable.

The writer, before leaving this part of his subject, expresses the opinion that "unless certain points are definitely adjusted by means of, if necessary, international pressure upon the Powers in occupation, the 'open door' in Manchuria will continue to be a hollow sham, and may lead to the dismemberment of China."

From this the writer discusses the situation as it affects Russia, both politically and economically.

Chapters XXII. to XXIV. are taken up with a description and investigation of the reform movement in China.

The next four chapters are devoted to an analysis of American commercial and political relations with China and the position of foreign residents in that Empire.

The writer is of the opinion that it requires only circumspect diplomatic activity for the United States to become the most influential foreign Power in the Chinese Empire, and that only by direct intervention of the United States can the "open door" be preserved.

Some 100 pages are devoted to the Philippine question from an American standpoint, including a comprehensive review of Philippine affairs generally, both political and economic.

In the closing chapter the writer considers America's strategic position in the Pacific, and discusses at some length the various factors which would enter into a struggle with Japan for supremacy in the Pacific.

The several treaties, conventions and agreements (thirteen in number) between the various Powers which bear on the situation in the Far East are given in extenso in the form of appendices at the end of the book.

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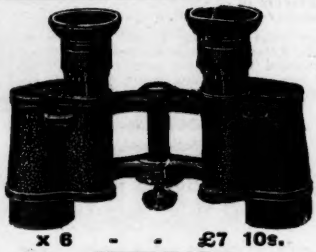

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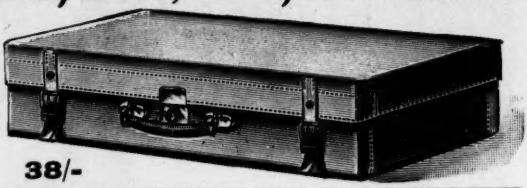

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